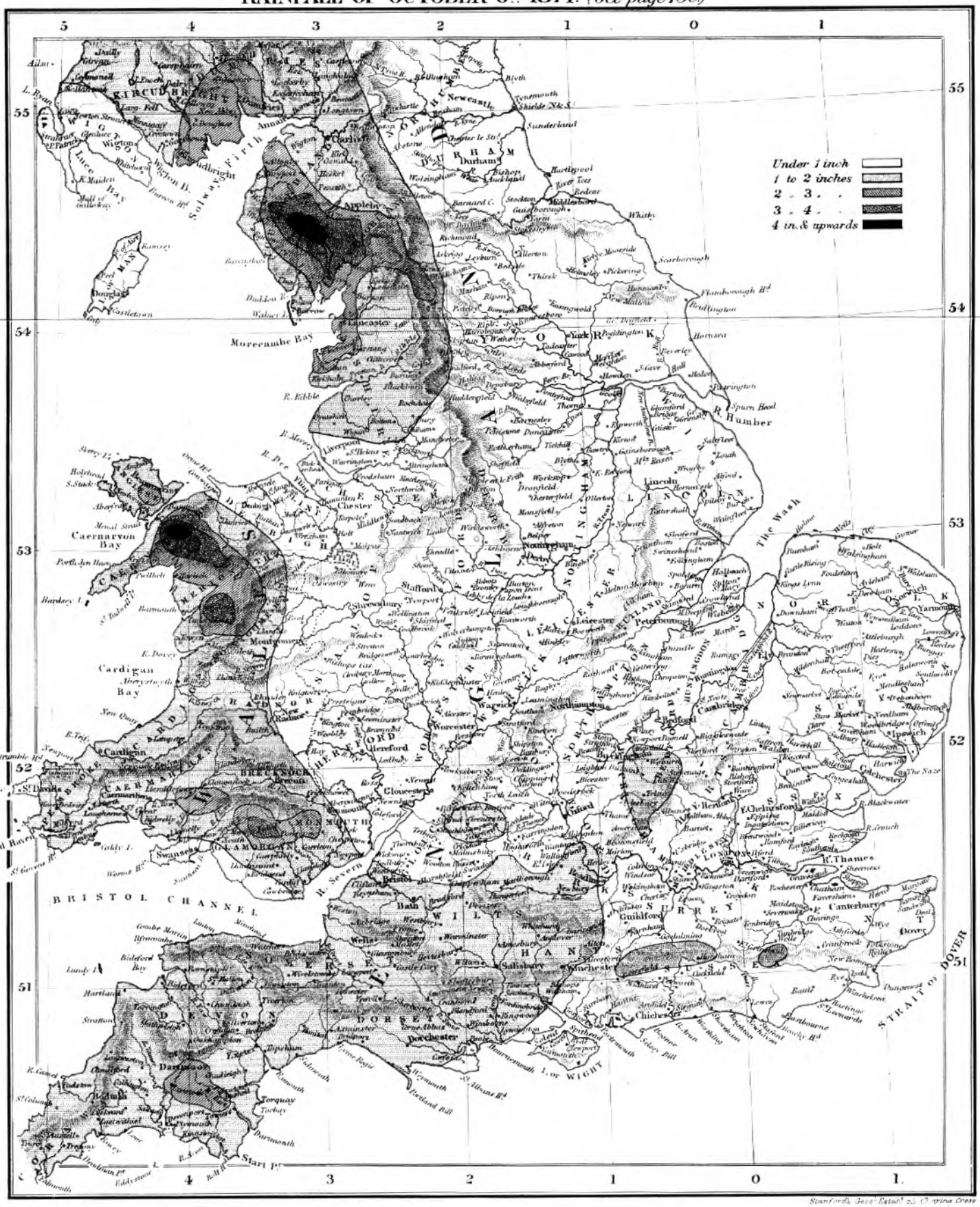
RAINFALL OF OCTOBER 6th 1874. *(See page 130)*



BRITISH RAINFALL, 1874.

ON

THE DISTRIBUTION OF RAIN

OVER THE

BRITISH ISLES,

DURING THE YEAR

1874,

AS OBSERVED AT ABOUT 1700 STATIONS IN GREAT BRITAIN AND IRELAND,

WITH MAPS, AND ILLUSTRATIONS.

COMPILED BY

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ERRATA IN "BRITISH RAINFALL, 1873."

Page 6.—First line of second paragraph—"publiction" should be "publication."
,, 64.—November 26th. After the date insert "Addiscombe II."
,, 122.—Div. XIX.—Sutherland. Erase the altitude.
,, 132.—Div. VII.—Wigston. Average 1860–65 should be 24·49, not 26·49, and therefore the difference values are 1·48—6.
,, 153.—KENT, Ashford. For "Buxford Ho." read "East Hill."
,, 173.—Sheffield (Handsworth Grange). 17·65 should be 17·48.
,, 177.—Wythburn. 96·00 should be 96·25.
,, 191.—Graemsay Sound E. 37·72 should be 38·12.
,, 192.—Cork (Queen's College). 33·99 should be 36·79.

BRITISH RAINFALL, 1874.

When a work has been published for fourteen successive years the necessity for an introduction or preface would seem to many to be diminished or removed. I do not think so, and have several reasons for my opinion. I will give only two, and they virtually resolve themselves into one. The readers of this volume are not the same as those of the last; many who will read this have not seen its precursors, while, alas! some who have seen the previous volumes can never see this. I think that everyone who takes up this book ought to know precisely how the great organization (of nearly two thousand observers) whose work is condensed in the following pages, is held together and supported. In the first place it is necessary to state that no grant or assistance of any kind is asked, or received from Government, or from any Society. The only ground for the great prevalence of misconception on this point is the fact that for some years some collateral branches of rainfall work have been carried out by me, under the direction of a Committee of the British Association, and the expenses which I have paid have been refunded by the Association.

As it is obvious that, not only is a work like this very expensive to print, and unlikely to have a large circulation, but the efficient maintenance of the organization necessary for its production is very costly; it would seem impossible to continue it, except at a heavy loss, and so, for several years, I found it.

Latterly, a yearly increasing number of the observers have (in addition to voluntarily keeping and transmitting their records) desired to share in the expenses of the investigations, and thus it is, that after ten or a dozen years of uphill work, I find myself with an unequalled and most kind staff of observers, and with funds, which if not very remunerative, are yet more than sufficient to meet the cost of assistants, printing, postages, travelling, and the host of minor expenses which such an extensive system naturally involves.

G. J. SYMONS.

62, Camden Square, London, N.W.
April 24th, 1874.

REPORT.

It may seem inconsistent, but it is not the less true, that very often the hardest work makes the least show—and this has certainly been the case with rainfall matters in 1874. The subsequent article, "Chronicle of New Stations established, and changes in the Permanent Staff of Observers," especially the Irish portion thereof, will give some idea of the class of organizing work which absorbs much of my time. I, however, doubt the possibility of any one not actually having the direction of an equally large corps, realizing the amount of detail which daily arises for consideration and decision. Although this necessarily involves constant thought, and the expenditure of much care and time, it is, I believe, one of the best features in the rainfall system, for the constant appeals of the observers to head quarters, for information and direction, necessarily tend to uniformity of procedure, and, if the simile may be permitted, to improved discipline and efficiency. I, therefore, regard the large and yearly increasing portion of time occupied in correspondence as at least equally well employed with any other portion. Another branch of work which I have developed has been the collection of monthly returns of rainfall, of which one hundred are published monthly in the *Meteorological Magazine* and many others are received, examined and filed, so as to reduce the pressure of winter work. I know not what that will finally amount to, but when I state that *one portion* of it involves the addition of nearly eleven thousand columns, that another part requires the taking of 1,500 differences, another involves the extraction from more than 1000 registers of the entry for each of the following data:—

Date. Division. Station. Total Rainfall in Year. Heaviest Fall.

the sorting of all these entries both chronologically and geographically, and the computation of the per-centage which the last value is of the penultimate—when, I say, these are but types of the work to be done—my readers will realize the fact that my assistants and I have quite enough to employ us during the early months of each year.

This is scarcely the place to dwell at any length on the progress of

rainfall work in other parts of the globe, but I rejoice to say that both on the Continent, in India, and in our Colonies, great advances are being made, and it is satisfactory to find that the patterns of gauge adopted for use in this country are spreading over the whole world and giving general satisfaction.

Another fact, not calling for a separate notice, is yet worthy of mention—namely, the connection (which the researches of the Rev. W. C. Ley and Professor Loomis seem to prove) between the localities of heavy rains and the path of violent storms. This is certainly a utilization of rain records which few would have anticipated.

As to the utility of rainfall records, or of maintaining in full efficiency an organization for their verification and preservation, I thing it has become needless to say anything. It will soon be as difficult to say in what respects rainfall work is useless, as it used to be to state why it was necessary.

COUNTY ORGANIZATIONS.

ALTHOUGH not progressing so rapidly as I wish, there has been some advance made in this respect during 1874. The list of County superintendents is, it is true, very little longer than it was last year, for there are but two additions, while there is one removal by death. I am very sorry that this proposal has not been more warmly supported, and I can only suppose that undue depreciatory estimation of their own eligibility has induced many of my friends to refrain from offering their services. I hope that this will no longer be the case, and that this will be the last time that I shall have to print so short a list :—

Sussex	F. E. Sawyer, Esq., F.M.S.	Buckingham Place, Brighton.
N. Hants	Rev. C. H. Griffith, F.M.S.	Strathfield Turgiss Winchfield.
Northampton	H. Terry, Esq.	Northampton.
Cambridge	S. H. Miller, Esq., F.R.A.S., F.M.S.,	Observatory, Wisbeach.
Norfolk	Rev. J. M. Du Port, M.A.	Mattishall, E. Dereham.
Hereford	Rev. Nash Stephenson, M.A.	Bromyard.
Stafford	W. Arnold, Esq., F.M.S.	Lichfield Street, Tamworth.
N. Yorkshire	Rev. F. W. Stow, M.A., F.M.S.	Aysgarth, Bedale.
Denbigh	Whitehall Dod, Esq.	Llannerch, St. Asaph.

References to new stations established during 1874 by these gentlemen will be more appropriately mentioned in a subsequent article. I

shall here, therefore, confine my remarks to the local publication of local rainfall. In Division III. (South Midland Counties) Mr. Terry has organized a staff of fourteen observers (almost all in Northamptonshire), who send returns to him monthly, which he arranges, and forwards to the *Northampton Herald*, the Editor of which has undertaken their regular insertion. The form of table gives the following information:—

	Total Depth.	No. of days on which ·01 or more rain fell.	Greatest fall in 24 hours.	
	Inches.		Depth.	Date.
Rothwell, A. Haviland, Esq. ...	2·42	15	·40	1st

In this Division there is also another organization for the Fen District, of which the results are published monthly by Mr. S. H. Miller, in his *Fenland Meteorological Circular*.

In Division IV. the Rev. J. M. Du Port continues to supply, and the Editor of the *Norfolk Chronicle* to publish, the most elaborate of all the local tables, as will be at once evident when I mention that these tables give the *daily* fall at 28 stations in Norfolk.

In Division V. there is an organization for which I am not certain to whom we are indebted. My knowledge amounts only to this, that the *Western Morning News* publishes monthly data, of which the following is a specimen, from 31 stations in Devon and Cornwall:—

	Total rainfall.	Greatest fall any one day.	Date of greatest fall.	Wet days.	Diameter of gauge.	Height above sea.	Above ground.
Navigation School, Plymouth—					in.		ft.
John Merrifield	7·58	2·15	1	28	8	75	9¼

In Division VI. the *Hereford Times* publishes the table of Herefordshire rainfall, compiled by the Rev. Nash Stephenson, and which gives the following data from 16 stations;—

Stations.	Total Depth in inches.	Greatest fall in 24 hrs. depth.	Greatest fall in 24 hrs. date.	Days on which 0·01 or more fell.
Brockhampton, near Bromyard	1·14	0·54	23rd.	22

J. Eling.

That which can be done in some counties and in some newspapers can be done in all. I cannot imagine any valid objection to the adoption of a similar course in all parts of the country, unless it be that these local tables are often so interesting that their perusal damages the sale of my

own publications; I do not know that it is so, but even if such be the case, I would still prefer that these county organizations should spread. While, then, there is no reason against the extension of this practice, there are the very strong arguments in its favour that it keeps the observers constantly on the alert to notice any discordant records, and it keeps the subject, and the localities in which no records exist, constantly before the public, while the newspapers are often purchased for the sake of the tables which they contain. I cannot think that any Editor would grudge the required space, for it would be hard for him to prove its value greater than that of the *Northampton Herald*, *Norfolk Chronicle*, *Western Morning News*, and *Hereford Times*. He must be proud, indeed, who deems his productions of more value than those of the quartet above quoted.

Although not publishing either a monthly or a purely local table, the extensive collection (three or four columns of small type annually), compiled and published by the *Preston Guardian* ought not to pass without a word of recognition.

NEW STORM RAIN GAUGE.

In *British Rainfall*, 1868 (pp. 27-28) will be found a description of a rain gauge which I designed for the facile observation of heavy falls of rain in short periods of time. Those observers who have tried it have been kind enough to express their approval; but it has two faults, which no notices, however flattering, will drive from my mind. (1). It requires attention in frosty weather to prevent the water passing into the tubes, being frozen, and then bursting them; (2) it is not easy to observe it at night. During the autumn of 1874 I decided upon trying to obtain an equally open scale gauge which should, moreover, be free from these faults. I gave the drawings to Mr. Pastorelli; he has made the instrument, and it has been in satisfactory operation for several months. If it continues to work as well as it has done, I will engrave and fully describe it next year.

THE RAINFALL AT CERTAIN HEALTH RESORTS IN THE UNITED KINGDOM.

In *British Rainfall*, 1866, page 61, I gave a short table of the rainfall, during that year, at some of the principal watering places in the United Kingdom. I am so frequently consulted upon the subject of the relative climate of different health resorts, that I am of opinion that a fuller notice of the rainfall, at some of the more important, will be generally acceptable.

At the outset, however, it is necessary to consider what constitutes a health resort. The definition is by no means easy. Are all places where mineral springs exist to be called health resorts? if so, scores of places where there is not the slightest accommodation for visitors, and of which 999 persons out of every 1000 have never heard, must be be included. Are all seaside towns and villages to be considered health resorts? some of them are, we fear, far from being either salubrious or adapted for receiving visitors. Are we to exclude all places which have neither mineral springs nor sea bathing? if so, we must exclude some localities which are extremely well adapted for the restoration of persons suffering the penalty of "life at high pressure."

I think, that in this matter, as in most others, no hard and fast line is possible, and the course which I have adopted is, therefore, an intermediate one. In the first place, I have taken considerable trouble to compile a list of mineral springs and sea bathing places in the British Isles. In the course of this enquiry, I have found every work on the medical topography of the United Kingdom which I have consulted so extremely imperfect, that, although I am certain that the following is much nearer complete than any which I have seen, I claim for it no higher position than that of being better than any other.

Perhaps, it may be asked for what reason such a long list should appear in these pages. It is easy to reply to this criticism. For the efficient compilation of the latter part of this article, it was necessary to be as nearly certain as possible that no important health resort was omitted. This certainty could only be approached by making a very

full list, and collating a large number of the best works on Medico-climatology, hence the following list was compiled, and the mental work being done, I think that few persons can doubt the expediency of its preservation for future reference.

There are yet a few other necessary prefatory remarks. The places are arranged alphabetically. The prefix M denotes that a mineral spring exists there, except when the ℳ is substituted for M, in which case I have reason to believe that, as at Bagnigge Wells, Hartlepool, *et al. loc.*, the spring has been lost. The prefix S denotes a seaside resort, and in most cases one with bathing accommodation.

I shall be much obliged to any one who will enable me to correct this table, by sending me statements of facts *within his own personal knowledge*. I do not wish for second-hand information.

S	Aberayron	Cardigan
S	Aberdeen	Aberdeen
S	Aberdour	Fife
S	Aberdovey	Merioneth
S	Abergele	Denbigh
S	Aberystwith	Cardigan
M	Acton	Middlesex
M	Admaston	Salop
M	Airthrie	Stirling
S	Aldborough	Suffolk
S	Alderney	Alderney
M	Aldfield	York, W.R.
M	Alford	Lincoln
M S	Arbroath	Forfar
S	Ardrossan	Ayr
M	Ashby de la Zouch	Leicester
M	Ashtead	Surrey
M	Askern	York
M	Astrop	Northampton
M	Axwell	Durham
ℳ	Bagnigge Wells	Middlesex
M	Baillieborough	Cavan
M	Ballynahinch	Down
M	Ballyspellan	Kilkenny
S	Banff	Banff
S	Bangor	Carnarvon
S	Barmouth	Merioneth
M	Barnet	Herts
M	Bath	Somerset
S	Beaumaris	Anglesea
M	Belturbet	Cavan
	Ben Rhydding, *see Ilkley.*	
ℳ	Beulah	Surrey
S	Bideford	Devon
M	Bilton	York, W.R.
M	Bircham	Berwick
S	Blackpool	Lancaster
M	Block	Dumfries
S	Bognor	Sussex
M	Bonnington	Edinburgh
S	Borth	Cardigan
M	Boscombe	Hants
M	Bourne Moor	Durham
S	Bournemouth	Hants
S	Bray	Wicklow
M	Brentwood	Essex
	Bridge of Allan, *see Airthrie.*	
	Bridge of Earn, *see Pitcaithly.*	
M S	Bridlington	York, E. R.
M S	Brighton	Sussex
M	Bristol	Gloucester
S	Broadstairs	Kent
M	Bromley	Kent
M	Brough	Westmoreland
M	Broughton	York, W. R.
S	Broughty Ferry	Forfar
M S	Buckie	Banff
S	Budleigh Salterton	Devon
M	Buglawton	Chester
M	Builth	Brecknock
S	Bundoran	Donegal
S	Burghead	Elgin
S	Burntisland	Fife
M	Butterby	Durham
M	Buxton	Derby
M	Candren	Renfrew
S	Cartmel	Lancaster
M	Castle Comer	Kilkenny
M	Castle Connel	Limerick
M	Chapelizod	Dublin
M	Cheltenham	Gloucester
M	Cherry Rock	Gloucester
M	Chigwell Row	Essex
S	Clevedon	Somerset
M	Clifton	Gloucester
M	Clitheroe	Lancaster
M	Cobham	Surrey
M	Colchester	Essex

M	Coldbath	Middlesex
	Cootehill, *see Drumgoon.*	
M	Corstorphine	Edinburgh
S	Cove	Cork
M	Crickle	York, W. R.
M	Croft	York, N. R.
S	Cromer	Norfolk
M	Cronebawn	Wicklow
M	Culgask	Perth
S	Cushendall	Antrim
S	Cushendun	Antrim
S	Dawlish	Devon
M	Delamere	Cheshire
M	Dinsdale Spa	Durham
M	Dog and Duck	Surrey
M	Dorton	Bucks
S	Dover	Kent
S	Dovercourt	Essex
M	Droitwich	Worcester
M	Drumgoon	Cavan
M	Drumsna	Leitrim
	Dulwich, *see Streatham.*	
M	Dunblane	Perth
M	Dungannon	Tyrone
S	Dunmore	Waterford
M	Dunse Spa	Berwick
S	Eastbourne	Sussex
M	Epsom	Surrey
M	Eskdaleside	York, N. R.
M	Ewell	Surrey
S	Exmouth	Devon
M	Felstead	Essex
M S	Filey	York, E. R.
M	Fir Hill	Aberdeen
S	Fishguard	Pembroke
S	Fleetwood	Lancaster
M S	Folkstone	Kent
M	Gethlyonen	Glamorgan
M	Gilcomston	Aberdeen
M	Gilsland	Cumberland
S	Glenarm	Antrim
M	Glendy	Kincardine
M	Gloucester	Gloucester
S	Gourock	Renfrew
M S	Grange	Lancaster
S	Guernsey	Guernsey
M	Guisborough	York, N. R.
M	Gunfreston	Pembroke
M	Hail Weston	Hunts
M	Hampstead	Middlesex
M	Hanley's Spa	Salop
M	Harlow Carr	York, W. R.
M	Harrogate	York, W. R.
	Hartfell, *see Moffat.*	
M	Hartlepool	Durham
S	Harwich	Essex
M S	Hastings	Sussex
S	Helensburgh	Dumbarton
S	Herne Bay	Kent
M	Hockley	Essex
M	Holbeck	York, W. R.
M	Holt	Wilts
M	Holt	Leicester
M	Holywell Spa	Lancashire
M	Horley Green	York, W. R.
	Hotwells, *see Clifton.*	
M	Hovingham	York, N. R.
M	Hoxton	Middlesex
S	Hunstanton	Norfolk
S	Hythe	Kent
S	Ilfracombe	Devon
M	Ilkley	York, W. R.
M	Ilmington	Gloucester
M	Innerleithen	Peebles
M S	Inverkeithing	Fife
M	Ipswich	Suffolk
M	Islington	Middlesex
S	Jersey	Jersey
M	Joppa	Edinburgh
M	Kensington	Middlesex
M	Kilburn	Middlesex
M S	Kilkee	Clare
M	Killymard	Donegal
M	Kincardine	Kincardine
M	Kinghorn	Fife
M	Knaresborough	York, W. R.
M	Knaresdale	Northumberland
M	Krevenish	Fermanagh
S	Largs	Ayr
M	Leamington	Warwick
S	Lehinch	Clare
M	Lees	Lancashire
M	Lewes	Sussex
	Lewisham, *see Streatham.*	
M	Lincomb	Somerset
M	Lisdoonvarna	Clare
S	Littlehampton	Sussex
M	Llandegley	Radnor
M	Llandeinislen	Carnarvon
M	Llandrindod	Radnor
S	Llandudno	Carnarvon
M	Llangammarch	Brecon
S	Llanstephan	Carmarthen
M	Llanwrtydd	Brecon
S	Lossiemouth	Elgin
M	Lough Lea	Cavan
S	Lowestoft	Suffolk
M S	Lucan	Dublin
S	Lyme Regis	Dorset
S	Lynmouth	Devon
S	Lynton	Devon
S	Lytham	Lancaster
M S	Mallow	Cork
M	Malton	York, N. R.
M	Malvern	Worcester
S	Margate	Kent
M	Markshall	Essex
M	Matlock	Derby

M Melksham .....Wiltshire
M Middleton .....Durham
Middleton, *see Stony Middleton*
M Middleton .....Carmarthen
M Middlewich..... ..Cheshire
S Miltown Malbay.....Clare
S Minehead..... .....Somerset
M Minty .....Gloucester
M Moffat .....Dumfries
M Muirtown .....Ross
S Mumbles.....Glamorgan
S Nairn .....Nairn
S New Brighton.....Chester
S Newcastle .....Down
M Newent .....Gloucester
M Newnham Regis.....Warwick
M Newtondale.....York, N. R.
M Northaw .....Herts
S N. Berwick..... ..Haddington
M Nottington .. ..Dorset
S Oban ....Argyll
M Offerton ....Durham
S Paignton.....Devon
M Pannanich .....Aberdeen
S Penmaenmawr .....Carnarvon
S Penzance.....Cornwall
M S Peterhead .....Aberdeen
M Pitcaithly .....Perth
S Portobello .....Edinburgh
S Portrush .....Antrim
S Port Stewart .. ..Londonderry
M Purton.....Wilts
M Radipole ... .Dorset
S Ramsgate.....Kent
S Redcar ....York
M Rhydryonem .....Merioneth
S Rhyll .....Flint
M Road ....Wilts
M Romford ... .Essex
S Rosstrevor .....Down
M S Rothesay .....Bute
S St. Andrews .....Fife
M St. Bernards .....Edinburgh
M St. Chad .....Middlesex
S St. Leonard's .....Sussex
M St. Pancras.....Middlesex
St. Philip, *see Yarrow.*
S Salcombe.....Devon
S Saltburn ....York
S Sandown ... .Hants
S Sandgate .....Kent
M Sandrock.....Hants
S Sark.....Sark
M S Scarborough .....York
S Seaford .....Sussex
S Seaton .....Devon
S Seaton Carew ..... .Durham
M Shadwell.....Middlesex
S Shanklin.....Hants
M Shap.....Westmoreland
S Sheerness.....Kent
M Shotley Bridge .....Durham
S Sidmouth .....Devon
S Silloth .....Cumberland
M Skipton ... .York, W. R.
M Slaithwaite .....York, W. R.
M Somersham .....Hunts
S Southend.....Essex
S Southport ..... Lancaster
S Southwold .....Suffolk
M S Spital .....Northumberland
M Springkell .....Dumfries
M Starbeck ....York, W. R.
M Stoke .....Surrey
S Stonehaven.....Kincardine
M Stony Middleton, ...Derby
M Stony Stratford .....Bucks
M Strathpeffer.....Ross
M Streatham .....Surrey
M Sunninghill.....Berks
M Sutton .. ..Surrey
M Sutton Bog.....Oxon
S Swanage .....Dorset
M Swanlinbar .....Cavan
M Swansea .....Glamorgan
Sydenham, see *Streatham.*
M Taafe ....Glamorgan
S Teignmouth.....Devon
M Tenbury .....Worcester
S Tenby ... .Pembroke
M Tewksbury .....Gloucester
M Thorlies Hope..... ...Roxburgh
M Thorp Arch.....York
M Tilbury .....Essex
S Torquay .....Devon
S Towyn..... ..Merioneth
M S Tralee .....Kerry
S Tramore .....Waterford
M Trefriw..... .Carnarvon
M Tunbridge Wells ...Kent
M S Tynemouth.....Northumberland
M Upminster .....Essex
M Vicars Bridge .....Clackmannan
M Victoria Spa .....Warwick
S Warrenpoint ..... Down
M Wellingboro' .....Northampton
S Weston-super-Mare ..Somerset
S Westward Ho. .....Devon
S Weymouth .....Dorset
M S Whitby .....York
M Willoughby ....Warwick
M Windsor Forest ..... Berks
M Witham .. ..Essex
M Withyam..... .....Sussex
M Woodhall Spa .....Lincoln
S Worthing .....Sussex
S Yarmouth .....Norfolk
M Yarrow.....Selkirk

It is obvious that if I were to attempt to determine the rainfall of each of these 303 places, not only would it occupy very many pages, but the time requisite would be several months. Moreover some of the springs (whether wisely or not, it is not for me to say) are at present utterly neglected and scarcely known, even in the parishes in which they are situated. This is not the place to exhibit the inconsistency with which the proper order of importance in British Mineral Springs has been sometimes reversed, simply through the fluent language of some local writer. My duty is merely to state a few facts respecting the rainfall of those places which common sense or fashion has made health resorts. Here again occurs difficulty in selecting, and still greater difficulty in rejecting. As, however, I have at one time or another, visited nearly all our health resorts, and as I have no personal interest in any of them, my decisions have, at any rate, to a great extent the qualifications of knowledge and impartiality.

The question which next rises is the period of which the rainfall at these various places is to be compared. The shorter the period selected, the more numerous will be the returns available, and *vice versâ*; it is therefore desirable to use as short a period as is consistent with an approximate extinction of the anomalies of individual years. Let me, at the risk of some prolixity, explain this sentence by using different words, and by an actual case. In the year 1866, "the rainfall of England, though universally in excess, was so, principally, along a tract, running S.S.E. to N.N.W., through the midland counties." Now suppose we selected the period 1865-69 for our standard, it is obvious that as it includes 1866, stations in the above-mentioned tract (unless the same tract was exceptionally dry in one of the other four years) would appear wetter than they really are. We require, therefore, either a period in which the distribution of rainfall was near the average over the whole kingdom, or one in which local excesses were mostly neutralized. Although it is by no means so good as I should have wished, I think on the whole that we cannot do better than take the last five years, 1870-74. Its relation at several stations to various averages quoted in this work, is given in the following table :—

Comparison of Mean Rainfall 1870-74 *with the average of previous years.*

Station.	MEAN.			Difference of 1870-4 from		Per-Centage. Difference from	
	1860-9	1860-5	1870-4	1860-9	1860-5	1860-9	1860-5
	in.	in.	in.				
Camden	25·68	25·01	24·34	—1·34	— ·67	—5	— 3
Uckfield	31·24	31·50	28·80	—2·44	—2·70	—8	— 9
Honingham..	23·98	23·28	24·49	+ ·51	+1·21	+2	+ 5
Penzance	41·51	41·71	44·62	+3·11	+2·91	+7	+ 7
Clifton.....	34·09	32·75	32·44	—1·65	— ·31	—5	— 1
Orleton	30·90	30·06	30·33	— ·57	+ ·27	—2	+ 1
Malton	27·46	26·54	27·95	+ ·49	+1·41	+2	+ 5
Llandudno ...	31·00	30·09	32·84	+1·84	+2·75	+6	+ 9
Largs	48·92	48·63	47·20	—1·72	—1·43	—4	— 3
Arbroath.....	29·05	29·71	27·99	—1·06	—1·72	—4	— 6
Cork Roy. Ins.	34·77	34·41	33·49	—1·28	— ·92	—4	— 3
Armagh	32·01	32·40	29·15	—2·86	—3·25	—9	—10
Mean	32·55	32·17	31·97	— ·58	— ·20	—2	— 1

From this it appears that the difference from some of the best mean values does not often exceed 6 per cent. I should have been glad had this difference been half what it is, but we must recollect that it is as useless to aim too high, as it is to aim too low, and if we try for a longer and more nearly perfect period, we shall have to end by ignoring half our health resorts. Besides, it must be recollected that though we speak of the rainfall at, say Ventnor, different parts of that town have a different rainfall, and probably the variation between the lower parts and the Railway Station, exceeds the limits of range assigned above. The final solution of the matter seems therefore to be that the arithmetical mean of the rainfall of the five years, 1870-74, gives a measure of the average rainfall of most parts of the United Kingdom sufficiently near the truth for our present purpose.

Even this period is, however, not available in all cases, and where it is not, I have applied carefully considered methods of differentiation which vary with the data at my command; being thus complex and variable it seems undesirable to occupy space with detailed illustrations of the mode of working out imperfect periods, and I therefore merely mention, that in all cases in which the records are imperfect, I have used all reasonable care to obtain values worthy of publication.

At four or five of the places mentioned below, no observations have ever been taken, and yet values are assigned to them. Yarmouth is a case in point. We have no long record from that town; but we have

Lowestoft 23, Honingham 24, and Cromer 24, and hence any one looking at the ordnance map would hardly deny that it must be 23 or 24 at Yarmouth. So again at Broadstairs, with 21 inches both at Ramsgate and Margate.

In the few cases in which the only available records are from gauges of which the orifices are more than 1 ft. 6 in. above the ground, the probable diminution due thereto has been computed and applied, so that all values may be regarded as those collected by guages at 1 ft., or 1 ft. 6 in. above the ground.

Following the Registrar General, and the plan almost always adopted in these pages, I shall group the stations in Registration Districts, and as a rule take each county by itself.

HEALTH RESORTS AND SEA BATHING PLACES.

London though a healthy city, and in times long past boasting many mineral springs, is certainly not a health resort; but it will, nevertheless, be convenient for comparison to mention that the rainfall in London during the above-named period was 24·34, which, by the bye, is within a few tenths of an inch of the true London average.

SOUTH-EASTERN COUNTIES.

Kent.—Owing to its proximity to the Metropolis, quite as much as to any special advantages of any other kind, the Kentish coast is quite fringed with health resorts, of which Herne Bay, Margate, Broadstairs, Ramsgate, Dover, Folkestone, Sandgate, and Hythe, are the principal, while inland, Tunbridge Wells must not be forgotten. At sleepy Herne Bay scarcely any observations have been made; but it probably shares with the Isle of Thanet the very small fall of 21 in. From Ramsgate to Dover, the fall rapidly and largely increases, and thence through Folkestone and Sandgate to Hythe, the fall is nearly or above 30 inches. This is obviously due to the highlands round Shorncliffe Camp. Tunbridge Wells has also a fall of about 30 inches, of which perhaps five inches are due to its height (400 ft.) above the sea.

Sussex.—In this county, the watering places, as far as rainfall is concerned, vary considerably: Bognor, Worthing, and St. Leonards, have 25 in. Hastings has 27 in., Brighton 28 in., and Eastbourne 30. One can readily understand that the mass of high ground at Beachy Head would render the fall at Eastbourne somewhat greater

than that at other coastal stations in the vicinity, but we do not see why Brighton should exceed Hastings, St. Leonards, Worthing, and Bognor, by from one to three inches.

Hampshire.—The principal health resorts which claim notice in this county are Bournemouth, and the Isle of Wight. The former, at one time, boasted (perhaps still boasts) a Meteorological Society, but we have seen no report for several years, and the returns which we have received have been very fragmentary. They, however, lead to the belief that the fall there is about 29 in., or nearly the same as on the Sussex coast. Respecting the rainfall of the western part of the Isle of Wight we have no information, but along its south eastern coast, from Niton to Bonchurch, it is about the same as at Bournemouth; Ryde has about 2 inches, and Newport 4 inches more than Ventnor.

EASTERN COUNTIES.

In the south-east of Essex, and the north-west of Norfolk we have respectively, Southend and Hunstanton, each of them with as small a rainfall as Margate and its vicinity, viz., 21 in. At all the other watering places on this coast the fall appears to be about 24 in., but we have only actual records from Lowestoft and Cromer.

SOUTH-WESTERN COUNTIES.

Dorsetshire has practically but one first-class health resort along its many miles of coast, of course that one is Melcombe Regis, or as it is generally called Weymouth, of which the rainfall is about 33 in. Pretty little Charmouth may have an inch or two more rain than Weymouth, but its remarkable cleanliness will, with many, outweigh a few additional showers.

Devonshire.—This county is for parliamentary purposes divided into north, south and east, but by one of those unaccountable eccentricities in which people sometimes indulge, East Devon is called South Devon.*

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* We believe that this is mainly due to a work (and a good work too) which is entitled "The Climate of the South of Devon, and its influence upon health, with some accounts of Exeter, Torquay, Babbicombe, Teignmouth, Dawlish, Exmouth, Budleigh Salterton, Sidmouth, &c., by T. Shapter, M.D." Curiously enough, every one of these towns is in *East* Devon. Moreover, the frontispiece to the work is a "Geological Map of South Devon;" and those who are acquainted with the fact that Dartmouth is the most northerly watering place in South Devon, will be amused to hear that this map of South Devon not only does not include Dartmouth, but actually does not pourtray a single mile of South Devon coast.

Passing over this inconsistency, we shall take the Devonshire stations in the order of their position, from Axmouth on the extreme east, to Plymouth, in the south-west, and then say a word or two respecting the northern health resorts; and yet there is not very much to say, for the rainfall along the eastern coast is very regular in its distribution, at Axmouth and Sidmouth it is about 31 in., at Exmouth and Dawlish about 33 in., at Teignmouth, Torquay, and Paignton it is greater, about 36 in. The fall is rather less at Brixham (owing perhaps to its exposed position). For Dartmouth no information exists; the fall probably varies considerably in that immediate district. Plymouth can hardly be called a health resort, although there are few more bracing walks than those on the Hoe; it may, however, be well to say that as far as regards quantity, Plymouth does not deserve the character for excessive rain which it has obtained; the fall there is but 40 in., or say four inches greater than Torquay. On the northern coast, we have first exquisitely romantic, but uninhabitable, Clovelly, then breezy Westward Ho! Ilfracombe and Lynton. Rainfall data for most of these places are imperfect, but probably they are almost exactly the same as Plymouth, viz.: 40 in.; it is, however, likely that they have fewer wet days—that is to say, that the falls are heavier while they last, but less frequent than at Plymouth. Lynton, from the effect of the hills to the S.W. of it, appears to have a much heavier rainfall—in fact, the few records which we have from Lynmouth and Martinhoe indicate a fall of nearly 50 in.

Cornwall.—This, with one important exception, is not a county for ordinary sea-side residence, but it is second only to the Lakes as a district for pedestrians, and for those who are strong enough to stand constant change. From its southerly position it might be expected to be hot and relaxing, but it is so surrounded by sea, and so swept by westerly winds, that it is in summer quite refreshingly cool. The rainfall is about 40 in. on the coast, but much heavier in the interior. A few attempts have been made to provide accommodation for residential sea-side visitors, but their success has been limited except in one case, that of Penzance, which, though rainy (45 in.), has perhaps the most pleasant winter of any part of England.

Somerset.—It is very desirable that some additional stations should be started along the coast of this county, from the mouth of the Parrett to that of the Avon, for though there appears no ground for impugning the accuracy of the existing and lately existent stations on that coast, it is not easy to explain why Bridgewater, Burnham, and

Weston-super-Mare should have so much less rain than any other stations on the west coast of England. The only reason which appears sufficient to explain the small fall of 28 in. on this coast, is that the south-west rain-bearing winds have previously passed over part of Dartmoor and the whole of Exmoor, and by these highlands been deprived of their vapour. This effect dies away as we go north-eastward, and Bristol has therefore four inches more rain. Bath, however, has not so much as Bristol, possibly because the Mendips act to Bath, as Exmoor does to Burnham and the north-west coast of Somerset.

MIDLAND COUNTIES.

The health resorts in these counties are almost all inland Mineral Spas, and few of them require more than mention. In Gloucestershire are Clifton (32 in.) and Cheltenham (27 in.) Malvern in Worcestershire has about (28 in.), but it varies in different parts according to the altitude above sea. Leamington, in Warwickshire, is one of the driest inland health resorts, its mean rainfall being very nearly the same as London (say 25 in.) Matlock and Buxton, the two principal Derbyshire health resorts, are much wetter; Matlock (as far as such an irregularly shaped locality can have an average assigned to it) has a rainfall of 37 in. (and an amount of night mist from the river, which is immeasurably bad), Buxton has much more rain, in fact it is the place of heaviest rainfall (51 in.) that we have yet mentioned, but yet the air is drier than at Matlock; in short, Buxton is high (1,000 ft. above sea level), cold, dry (in spite of the rain), and bracing. Matlock is warmer and damper, but the damp in the evenings is extremely chilling.

Lancashire.—The fall along the shore of south-west Lancashire is about 34 in., and there is scarcely any difference between the various places; if anything, Lytham appears slightly wetter than Blackpool, Fleetwood, or Southport, but practically they are in this respect all alike.

Yorkshire.—This county has two well-known inland health resorts, Harrogate with about 34 in. and Ilkley far up in the moors, with mountain air, and yet scarcely mountain rain, for it is only 38 in. On the coast, going northwards, are Bridlington, Filey, Scarborough, Whitby, and Saltburn. No one will observe the rainfall at Bridlington, so we can only guess (on good data though) that it is 25 in., the other places

have about 26 in., and beautiful Scarborough pays for the proximity of Oliver's Mount by an additional inch.

The English Lakes.—This district boasts but one mineral spring—that at Shap Wells, on the Lancaster and Carlisle railway, and quite away in the east of what is ordinarily considered the Lake district. There is no sea bathing, no concert room, no band, none in fact of the usual requirements (?) of a health resort; the rainfall in some parts is excessive, greater than in almost any other part of Europe, and yet a yearly increasing number of visitors swarm into the district. And no wonder, for though the rain may pour down in torrents for hours, and occasionally one must either spend a day indoors, or battle with a heavy fall, there is a purity and elasticity in the air, a brightness in the sunshine, and a beauty in the scenery, which, with most people, far outweighs the occasional discomfort of watching a pouring rain and cloud capped mountains. Moreover, it by no means always rains there, take even Seathwaite (140 in.) which has nearly twice as much rain as the average of the district (77 in.) there were last year 1874, the following periods without rain or with the insignificant quantities set against them :—

Date.	Total Days.	Rain during period	
		Days.	Depth.
February 2nd to 11th.....	10	1	0·20
March 2nd to 10th.....	9	1	0·17
April 25th to May 2nd	8	0	...
May 10th to 26th.....	17	2	0·44
June 3rd to 8th.....	6	0	...
June 12th to 22nd ...	11	0	...
July 6th to 19th.....	14	1	1·36
August 19th to 26th.....	8	0	... *
November 10th to 15th.....	6	1	0·50
December 12th to 31st	20	2	1·00

* And yet the Total in the month, was 18·60 in.

Wales and the Islands.—The principal health resorts in the Principality are Tenby, in the south, with a heavy rainfall 48 in.; Aberystwith on the west, seems only to have about 31 in.; while Llandudno and dreamy Rhyll, on the north, have about 30 in. and 28 in. respectively. Of inland places, we believe Llandrindod to be one of the breeziest and best; we have only one year's rainfall record from that high moorland tract, but it indicates a very small fall, 28 in. We may here add, that Beaumaris in Anglesea has 39 in., and that of the Channel Islands, Guernsey has 40, and Jersey rather less, perhaps 35.

SCOTLAND.

Dividing Scottish health resorts into two classes, inland and coastal, and selecting those most frequented, we have for the former—Moffat, in Dumfriesshire at the eastern foot of the Leadhills with consequently a heavy rainfall, nearly 60 in. ; Bridge of Allan, near Stirling, equally fashionable and pretty, and with a moderate rainfall about 30 in. ; and lastly breezy Braemar, at the head of the Dee, above Balmoral, more than 1,100 ft. above the sea and yet not wet, 33 in. because the rain clouds, ere they reach Braemar, have yielded their excess of vapour to the Argyllshire and Perthshire mountains.

The best known seaside health resorts are, we believe, Ardrossan (43 in.), Largs (47 in.), Rothesay (48 in.), a very mild and beautiful spot, in the island of Bute, and Oban (60 in.), a well placed town (but needing much improvement) on the Argyllshire coast. On the east coast we may mention Burntisland and Aberdour, in Fife, and Broughty Ferry, near Dundee, each with about 29 in. of rain, and though last, by no means least (except in their rainfall), Nairn and Forres, with only about 25 in., and we believe a very mild climate.

IRELAND.

I cannot say anything definite respecting the rainfall of Irish health resorts, because there are scarcely any data available. Cove (Co. Cork) has about 33 in., and Bray (Co. Wicklow), about 35 in., but respecting Newcastle (Co. Down), Warrenpoint, Cushendall, Portrush, Bundoran, and other Irish seaside resorts, I can say nothing at present.

SUMMARY.

I have already explained why the figures assigned to the various places mentioned in this article are to be regarded as approximations only. As it is quite probable that several of them are an inch or two in error, and that future observations will necessitate many slight changes, I have hesitated considerably before publishing the following table. It seems, however, desirable to do so, the above caution being prefixed, because, though probably many of the values are slightly erroneous, I believe, that, on the whole, they are far better than any yet obtainable.

in.	
21	Herne Bay, Margate, Ramsgate, Broadstairs, Southend, Hunstanton.
24	London, Lowestoft, Yarmouth, Cromer
25	Bognor, Worthing, St. Leonards, Leamington, Bridlington, Nairn, Forres.
26	Filey, Whitby.
27	Hastings, Cheltenham, Scarborough.

in.	
28	Dover, Brighton, Bridgwater, Burnham, Weston-super-Mare, Malvern, Rhyll.
29	Folkestone, Bournemouth, Niton, Ventnor, Bath, Burntisland, Aberdour, Broughty Ferry.
30	Sandgate, Tunbridge Wells, Eastbourne, Llandudno, Bridge of Allan.
31	Ryde, Axmouth, Sidmouth, Aberystwith.
32	Clifton.
33	Hythe, Newport (I. of Wight), Weymouth, Exmouth, Dawlish, Braemar, Cove
34	Charmouth, Teignmouth, Brixham, Blackpool, Fleetwood, Southport, Harrogate.
35	Lytham, Jersey, Bray.
36	Torquay, Paignton.
37	Matlock.
38	Ilkley.
39	Beaumaris.
40	Plymouth, Westward Ho! Ilfracombe, Guernsey.
43	Ardrossan
45	Penzance.
47	Largs.
48	Lynmouth, Tenby, Rothesay.
51	Buxton.
58	Moffat.
60	Oban.
77	The Lake District.

THE INTERNATIONAL CONGRESSES AND THE SIZE OF RAIN GAUGES.

We are sure that all readers of these pages will rejoice to hear that at the Utrecht meeting of the Permanent Committee, the suggestions of the Leipzig, and the decision of the Vienna meetings on the above subject, were recommended for reconsideration. And not only so, but in the *Zeitschrift* of the Austrian Meteorological Society for March 15th, 1875, Dr. Jelinek has published the following important paper :—

THE NEW RAIN GAUGES AND MEASURING GLASSES OF THE IMPERIAL CENTRAL METEOROLOGICAL INSTITUTE AT VIENNA.

The readers of this journal will recollect that Mr. G. J. Symons, to whom England is indebted for its elaborate system of rain stations, and who is editor of the yearly publication *British Rainfall*, addressed a communication to the Meteorological Congress, at Vienna, in which he strongly defended the form of rain gauge usual in England, of small receiving area and of slight elevation, the receiving area being only one foot above the surface of the ground. We have given in vol. ix. p. 25-26 of this journal, an abstract of Symons's paper. At the Vienna Meteorological Congress, Mr. A. Buchan, the secretary of the Scottish Meteorological Society, advocated with no less energy the adoption of the small English rain gauge.

At the meeting of the Permanent Committee held at Utrecht, September 10th to 14th, 1874, reports were received from the directors of the various Meteorological Offices on the results of the decisions of the Vienna Congress. Several of these reports touch upon the question of the size of rain gauges and the positions in which they should be placed.

Herr Coumbary, at Constantinople, recommended a rain gauge of 8·662 in. diameter; Dr. Sohncke, of Carlsruhe, one of 9·843 in.; Capt. Hoffmeyer, of Copenhagen, one of one-tenth of a square metre in area [*i.e.* if circular 14·048 in. diameter, if square 12·450 in. on each side]; Mr. Buchan, of Edinburgh, one of the diameter of 3, 5, 8, or 12 in.; Mr. Scott, of London, one of 8 in. diameter. Mr. Buchan declared

that the Scottish Society would adhere to the kind of gauge hitherto employed, and that there was no need for the large gauges (14·048 in. diameter) recommended by the Vienna Congress. Mr. Scott expressed himself as follows :—"The experiments made in our country speak decisively against the necessity for a gauge of the large size of 14 in. diameter. The Meteorological Office will, as hitherto, employ a rain gauge of 8 in. diameter, which has proved very good."

The Permanent Committee, at its second meeting, at Utrecht, on September 11th, 1874, adopted the following resolution :—

"In reference to the representations which have been addressed to the Meteorological Congress, by Mr. Symons, and others, against the dimensions of the proposed rain gauge, and also as to the necessity for the erection of numerous rain gauge stations, which will have to be provided with simple and inexpensive instruments, it appears to the Permanent Committee desirable to recommend to the next Meteorological Congress to consider anew the diameter and height above the soil to be adopted for rain gauges for newly-established stations."

As it appeared that the majority of the Permanent Committee were favourable to the adoption of rain gauges with small receiving surfaces, and as it appears desirable in a mountainous country like Austria to have very numerous rain gauge stations, and as the transition from large to small will be only the more difficult the more of the former there are in operation, the direction of the Central Meteorological Office has decided that from the commencement of the year 1875, a small rain gauge, with an area of one-twentieth of a square metre (9·934 in. diameter) shall be issued to the stations. . .

The dimensions of the measuring glass are so arranged, that one will be able to measure at once, 10 $^{mm.}$ (0·394 in.) that is, that the capacity of the measuring glass is equal to or greater than 500 cubic centimeters (30·514 cubic inches, or 7705 grains). . . .

The large rain gauges and their corresponding measuring glasses, already at the stations, will not be changed, as their results will be identical with those of the new rain gauges.

C. JELINEK.

We are very glad to find that Dr. Jelinek has agreed to adopt gauges of 10 in. diameter, instead of 14 in. ones, but we think that it would have been better to go still further, say to 1-30th of a square metre instead of 1-20th, as that would have given a gauge very nearly corresponding to our 8 in. gauges. Moreover, we think it rather liable to lead to error that 1-20th of a square metre should have been chosen,

because if the gauges are to be circular, their diameter must be 25·23 centimetres, which is so near Dr. Sohncke's gauges, 25 centimetres, as not to be readily distinguished from them, and yet sufficiently different to lead to error if the glasses get mismatched. The diameters in English measures are 9·934 in. and 9·843 in. respectively, in fact we fear that it may, but we sincerely hope it will not, lead to the confusion which threatened to arise from the introduction of Jagga Rao's gauge into Scotland, whereby we should have had gauges of the following diameters: Jagga Rao 4·697 in., Howard's 5·000 in., and Knight's 5·050 in.

ON THE MEASUREMENT OF SNOW.

By Col. Ward, F.M.S., F.R.A.S., &c.

In making the following experiments, I had two objects in view. Firstly, to throw, if possible, some light on the subject of snow measurement, and, secondly, to test the respective merits of the Ordinary Pattern Rain Gauge, and of that known as the Snowdon Gauge, viz., by ascertaining whether, in the latter, any supposed loss during the summer, owing to the increased surface to be wetted, was compensated by the gain during winter, especially in snowy weather.

During my series of observations at Calne, without any preconceived notions as to the form of any gauge, I had, with the rest, a japanned iron 5 in. Snowdon gauge, which was placed near a copper 5 in. of the ordinary pattern, and the result of nearly three years' observations, seeming to be in favour of the Snowdon pattern, I continued making observations with the same gauges, for the space of another three years, but the records are lost.

The Table annexed gives the monthly totals of the Calne observations:—

TABLE I.—*Results at Castle House, Calne, Wiltshire.*

Date.	5 in. Gauges.		Excess of	
	Ordinary Pattern.	Snowdon Pattern.	Ordinary.	Snowdon.
1865—April	·735	·647	·088	..
May.....	2·284	2·198	·086	...
June	1·532	1·553	...	·021
July.....	2·871	2·924	...	·053
August ...	4·173	4·257	...	·084
September.	·130	·158	...	·028
October.....	5·258	5·585	...	·327
November..	3·209	3·348	...	·139
December..	2·365	2·558	...	·193
1866—January....	3·623	3·847	...	·224
February...	3·977	4·219	...	·242
March	1·963	2·106	...	·143
April..... ..	2·206	2·204	·002	...
May..... ..	1·160	1·152	·008	...
June.....	2·985	3·025	...	·040
July.....	1·466	1·453	·013	...
August.....	2·419	2·440	...	·021
September.	6·647	6·806	...	·159
October....	2·108	2·183	...	·075
November.	2·095	2·440	...	·345
December..	2·859	3·064	...	·205
1867—January....	3·268	3·458	...	·190
February ..	1·796	2·001	...	·205
March.....	3·135	2·885	·250	...
April.....	3·126	3·213	..	·087
May.....	1·819	1·798	·021	..
June	2·158	2·208	...	·050
July.....	3·733	3·693	·040	...
August.....	3·071	3·065	·006	...
September.	1·771	1·785	...	·014
October....	2·824	2·855	...	·031
November .	1·308	1·308	·000	·000
December..	1·630	1·700	...	·070
1868—January....	4·439	4·446	...	·007
February...	1·703	1·700	·003	...
TOTALS	91·846	94·282	·517	2·953

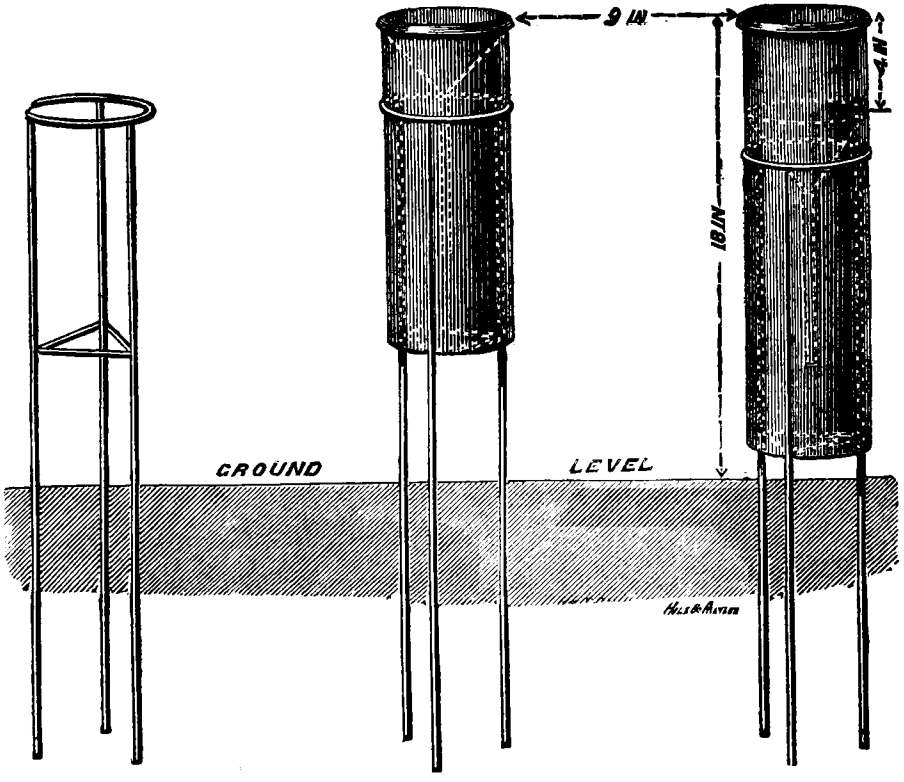
I greatly regret not being able to give the totals of the next three years, they having been accidentally burnt with some old papers, when packing up to come abroad. Suffice it, however, to say, that they were even more in favour of the Snowdon pattern; so much so, that, when I came to Switzerland—where the extremes of temperature are greater, and the rain and snow fall far in excess of that in England—

I determined on having gauges out, and trying them in this place, at an elevation of more than 3000 ft. above the mean sea level.

I fixed the two gauges—one a copper one, the Snowdon of japanned iron—within 9 in. of each other, the rims of their funnels exactly on a level with each other, and 18 in. above the ground. To ensure stability, I placed them in strong iron holders, running some distance into the ground; so that no sort of weather could possibly disturb the exact level, which I tested constantly with one of the double spirit levels, made by Casella for the purpose.

The adjoining sketch shews the gauges *in situ* as well as the iron frame which, by the bye, would be better for four legs instead of three.

Fig. 1.



I commenced the observations in October, 1873.

In September, 1874, I thought it advisable to try two gauges of *the same metal*, and had out, accordingly, a copper Snowdon. For some days it registered one-hundredth less than the others, owing, I fancy, to the high polish on the new metal, which retained a considerable quantity of drops on the *funnel—not* on the *upright sides*. After a few days' exposure, however, and a cleaning of the surface with fine

wood ashes, it retained no more drops than the others; and as the three gauges worked together, I eventually discarded the iron gauge, and from the 1st October, 1874, carried on the observations with the copper one. I should have gone on with the three, but I found, in the previous winter, that two were quite enough to look after in the extreme cold: indeed, twice were my hands blistered by the cold metal.

The iron gauge was not, however, idle: I handed it over to the Pastor of the parish, whose Cure is about 200 yards from here and about 50 ft. higher up the hill. I fixed it for him, and gave him directions how to observe, and as to the melting of the snow. His result for the five months is 25·53 in., mine for the same period 25·44 in.

The following table shows the monthly totals of my two gauges up to the end of February, 1875.

TABLE II.

Date.	5 in. Gauges.		Excess of	
	Ordinary Pattern.	Snowdon Pattern.	Ordinary.	Snowdon.
1873—October.....	2·075	2·095	...	·020
November.	4·350	4·650	...	·300
December..	·900	1·110	...	·210
1874—January....	* ·545	1·110	...	·565
February...	* ·350	·500	...	·150
March	* 1·940	2·240	...	·300
April.....	2·577	2·642	...	·065
May.....	3·955	4·060	...	·105
June	8·690	8·710	...	·020
July.....	9·860	9·860	...	...
August.....	5·220	5·220	...	..
September.	1·980	1·980	...	...
October.....	3·150	3·150	...	...
November.	7·810	7·865	...	·055
December..	* 3·310	6·805	...	3·495
1875—January....	6·455	6·515	...	·060
February...	1·090	1·105	...	·015
	64·257	69·617	...	5·360

In reading the above table it must be borne in mind that, on many days, it was impossible to measure the fall in the ordinary gauge, owing to its not being able to contain the amount of snow: this circumstance accounts for the large difference between the two gauges in those months against which I have placed an asterisk.

TABLE III.—DETAILS OF SNOW MEASUREMENT AT ROSSINIÈRE.

Date.	1. 5 in. Gauges, 1ft. 6in. above level of ground, 9 inches apart. Ordinary Pattern.	2. 5 in. Gauges, 1ft. 6in. above level of ground, 9 inches apart. Snowdon Pattern.	3. Means of five measurements by inverted funnel.	4. Depth of fall in inches and tenths	5. Direction of Wind.	6. Force 0—10.	7. Temperature during fall.	8. Duration of fall.	R, rain; S, snow; Sl, sleet; TS, thunderstorm. * denotes that the snow lay at once without any melting. The blanks in Col. 1 denote that the rain gauge could not contain the snow.
1873							deg.	h. m.	
Oct.	·320	·320	...	...	W.	1	...	...	S and R.
	·600	·610	...	...	,,	1	...	...	S and Sl.
	·020	·020	...	...	,,	1	...	...	do.
Nov....	·060	·070	...	...	S.W.	1	...	...	S and R turning to S.
	·630	·700	...	...	W.	7	...	...	S and R. *High wind.*
	1·720	1·720	...	...	N.W.	2	...	...	R, S and Sl.
	·100	·100	·080	1·0	W.	1	32	...	S.
	·900	1·130	·600	6·0	N.W.	8	32	...	TS, 4 a.m., with *gale* and heavy R turning to S.
Dec....	·090	·110	...	...	,,	4	...	...	Sl. *High wind.*
	·420	·610	·420	5·0	N.E.	9	...	....	S. *Violent gale.*
1874									
	·310	·570	·500	7·0	,,	7	...	...	R turning to S. *High wind.*
Jan. ...	·010	·015	...	...	,,	3	...	...	Slight S, melting in sun as it fell.
	...	·500	* ·500	6·0	,,	2	27	4 0	S.
	·010	·010	...	...	C.	0	...	...	Slight S, melting as it fell.
Feb....	·050	·050	...	...	,,	0	...	...	do.
	...	·450	* ·430	5·0	,,	0	22	5 0	S in fine crystals.
March	·070	·070	...	...	,,	0	...	...	S and R.
	·120	·230	* ·225	3·0	S.W.	6	30	3 0	S in fine crystals. *High wind.*
	...	·310	·310	5·0	W.	1	...	...	S during night.
	·130	·130	* ·130	2·2	N.E.	1	20	3 0	Fine crystal S.
	·150	·200	* ·180	3·0	,,	1	20	4 0	do. *Strong wind 1 hour.*
	·200	·210	·210	3·0	,,	1	...	...	S in night.
	·145	·145	...	...	N.	3	...	...	Showers of S and R.
April..	·020	·020	...	...	S.W.	6	...	3 0	S and Sl.
	·110	·140	...	...	,,	8	...	...	S and R. *Very high wind.* [lying on old S and grass.
	·440	·440	·430	5·0	C.	0	37	8 0	Heavy S in enormous dense flakes, melting in gauges as it fell, but
	·070	·070	...	...	,,	0	...	3 0	S and Sl.
	·040	·040	...	...	,,	0	...	3 0	Small S.
	·722	·722	·652	7·0	,,	0	36-31	23 0	S melting in gauges as it fell, and lying, after a time, on the ground.
	·090	·110	...	...	N.E.	4	...	...	S and hailstorms.
	·035	·040	...	...	,,	4	...	...	Hailstorm.
	·200	·210	...	...	,,	5	...	...	R and S. *High wind.*
	·170	·170	...	...	C.	0	...	...	R and S.
	·200	·200	...	...	,,	0	...	...	do.
May...	·065	·073	...	...	S.W.	5	...	...	S. *High wind.*
	·160	·160	...	...	C.	0	...	8 0	S in large light flakes.
	·080	·100	...	...	S.W.	5	...	...	S storms. *High wind.*
	·080	·090	...	...	N.E.	5	...	...	do. do.
	·350	·350	...	...	C.	0	...	...	S
	·050	·050	...	...	,,	0	...	...	S
	·330	·330	...	...	,,	0	...	...	S
	·140	·140	...	...	,,	0	...	...	S
	·015	·015	...	...	N.E.	1	...	...	Light S showers.
	·035	·082	...	...	,,	5	...	...	Heavy S storms. *High wind.*
	·050	·060	...	...	,,	5	...	...	do. do.
	·015	·025	...	...	,,	5	...	...	do. do.
	·750	·750	...	...	,,	1	37	4 0	Heavy S.
June...	·020	·040	...	...	...	...	...	0 10	TS, with large hailstones.
Nov ...	·050	·050	·035	0·6	N.E.	1	24	1 0	Minute S.
	·070	·080	·075	0·9	,,	5	24	2 0	do. *High wind.*
	·120	·120	* ·090	1·5	C.	0	24-32	4 0	do. changing in 2 hours to large flakes.
	·200	·200	* ·200	3·0	,,	0	31	6 0	Fine S.
	·130	·150	* ·115	2·0	W.S.W.	5	30	3 0	S in hard globules. *High wind.*
	·105	·120	* ·080	1·0	,,	5	31	1 0	do. do. do.
	·140	·140	* ·140	2·0	W.N.W.	2	30	2 0	S in small crystals.
	·010	·020	...	...	N.E.	5	25	...	Light S storms. *High wind.*
	·025	·025	* ·020	1·0	C.	0	28	3 0	Very light fleecy S. [(about ¼ in.) half ice.
Dec....	...	1·730	·650	4·0	S.W.	1	47-32	11 0	Heavy R, succeeded by heavy S. The lower surface of the measured S
	...	·450	* ·440	7·5	C.	0	30	6 0	S in enormous light flakes. This S sank to a depth of 5 in. next morning, and yielded the same amount of water, ·440. The following morning, ·435.
	·065	·065	* ·060	0·5	,,	0	29	2 0	Minute S.
	·110	·110	* ·110	1·0	,,	0	25	4 0	do.
	·120	·120	...	...	,,	0	32	...	R and S.
	·100	·120	* ·120	1·5	N.W.	6	27	...	S in hard globules. *High wind.*
		·450	* ·450	6·0	W.S.W.	2	27	...	Minute S.
	·060	·060	* ·060	1·0	,,	2	23	...	Small S. [funnel.
	·350	·500	...	...	,,	8	21	...	Minute S, with *gale*. Immense drifts; impossible to measure with
	...	·870	·740	3·5	,,	2	25-6	...	Sl. and ice-drops turning to S.
	...	·585	* ·580	7·5	,,	4	32	9 0	Small S turning to large flakes.
	...	·225	* ·220	6·7	C.	0	33-30	7 0	S in enormous light flakes. It sank to 4 in. in depth during night, and yielded again ·220. The following morning, ·210.
	·030	·030	* ·030	0·5	,,	0	21	1 30	Minute S.
	·030	·030	* ·030	0·5	,,	0	22	1 30	do.
	·070	·070	* ·070	1·1	,,	0	21	...	do.
	·090	·090	* ·090	1·4	,,	0	21	...	do.
	·050	·050	* ·050	0·5	,,	0	13	4 0	do. literally powder.
	·370	·400	..	..	S.W.	9	44-29	...	R turning to large S. *Violent gale.*
	·130	·140	* ·200	2·0	,,	5	28	...	Minute S, afterwards in globules. *High wind.*
	·040	·040	* ·040	0·5	C.	0	21	1 0	do.
1875									
Jan. ...	·165	·165	* ·150	1·8	N.W.	2	30	7 0	Small S.
	·290	·290	...	...	C.	0	39	7 0	S in large flakes, melting as soon as fallen.
	·110	·110	...	.	N.E.	1	...	...	Small S and Sl.
	·310	·320	...	...	,,	4	30	10 0	do. do.
	·550	·550	...	...	C.	0	...	...	S and frozen R.
	·600	·620	...	...	N.W.	5	...	...	S, R and hail. *High wind.*
	·440	·470	...	...	,,	6	39-33	...	S. *High wind.*
Feb....	·300	·300	...	...	,,	2	33	...	S in large flakes, melting as it fell.
	·230	·230	* ·200	2·0	N.	2	21	...	Light S.
	·020	·020	...	...	,,	2	29	...	Minute S.
	·035	·040	...	...	,,	4	23	1 0	do. with *wind*.
	·340	·350	* ·350	3·5	C.	0	22	4 0	do. do.
	·025	·025	...	...	N.W.	2	31	1 0	S and frozen R.
	·020	·020	* ·020	0·2	N.E.	1	22	...	Minute S at times, all day.
	·040	·040	* ·040	0·4	,,	1	23	1 30	Minute S.
	·080	·080	·050	1·0	C.	0	35	2 30	Light fleecy S.
	16·312	23·377	...	124·8	..	...	...	...	

									wood three and fr… copper… the pr… extrem… metal. … Pasto… about… direct… result 25·44… Th… to the…
									… and yielded again ·220. The following morning, ·210.
	·030	·030	* ·030	0·5	,,	0	21	1 30	Minute S.
	·030	·030	* ·030	0·5	,,	0	22	1 30	do.
	·070	·070	* ·070	1·1	,,	0	21	...	do.
	·090	·090	* ·090	1·4	,,	0	21	...	do.
	·050	·050	* ·050	0·5	,,	0	13	4 0	do. literally powder.
	·370	·400	...	...	S.W.	9	44-29	...	R turning to large S. *Violent gale.*
	·130	·140	* ·200	2·0	,,	5	28	...	Minute S, afterwards in globules. *High wind.*
	·040	·040	* ·040	0·5	C.	0	21	1 0	do.
1875									
Jan. ...	·165	·165	* ·150	1·8	N.W.	2	30	7 0	Small S.
	·290	·290	...	...	C.	0	39	7 0	S in large flakes, melting as soon as fallen.
	·110	·110	...	...	N.E.	1	...	...	Small S and Sl.
	·310	·320	...	...	,,	4	30	10 0	do. do.
	·550	·550	...	...	C.	0	...	...	S and frozen R.
	·600	·620	...	...	N.W.	5	...	...	S, R and hail. *High wind.*
	·440	·470	...	...	,,	6	39-33	...	S. *High wind.*
Feb....	·300	·300	...	...	,,	2	33	...	S in large flakes, melting as it fell.
	·230	·230	* ·200	2·0	N.	2	21	...	Light S.
	·020	·020	...	...	,,	2	29	...	Minute S.
	·035	·040	...	...	,,	4	23	1 0	do. with *wind*.
	·340	·350	* ·350	3·5	C.	0	22	4 0	do. do.
	·025	·025	...	...	N.W.	2	31	1 0	S and frozen R.
	·020	·020	* ·020	0·2	N.E.	1	22	...	Minute S at times, all day.
	·040	·040	* ·040	0·4	,,	1	23	1 30	Minute S.
	·080	·080	·050	1·0	C.	0	35	2 30	Light fleecy S.
	16·312	23·377	...	124·8	...	...	...	...	

I was able in the two years to obtain more than 30 measurements by inverted funnel, when the snow *lay as soon as it fell* without any melting: such are marked with an asterisk in column three, Table III., which shows every fall of snow, sleet, or hail—the depth of snow in inches and tenths—the direction and estimated force of wind—the temperature during fall, ascertained when possible from max. and min. thermometers outside a window—and also the duration of each fall.

As, in this country, in measuring with inverted funnel, the snow will not adhere so as to come up with the funnel, I had a flat trowel made, which I slipped under the mouth of the funnel when inverted: the measurements so obtained and given in column three, are means of five or more taken on each occasion, and were taken on a flat gravel walk near to the gauges, swept clean after every fall. I always measured, if possible, whenever the snow ceased: and, in addition, I tried several other measurements with different kinds of snow, which are given in the following table:—

TABLE IV.—*Means of* 10 *measurements of Snow of different density.*

Minute Crystals. 3 in.	Small Snow. 2 in.	Large dense flakes. 3 in.	Large light flakes. 7·5 in.	Large light flakes. 6·7 in.	Round Globules. 2 in.
·220	·200	·310	·445	·230	·120
·225	·210	·260	·445	·220	·110
·220	·190	·280	·440	·230	·115
·223	·190	·320	·455	·225	·110
·227	·210	·310	·425	·200	·120
·228	·220	·305	·445	·210	·120
·220	·200	·297	·445	·225	·100
·229	·190	·298	·440	·220	·120
·233	·190	·300	·445	·225	·115
·225	·200	·310	·425	·215	·120
Mean ·225	·200	·299	·441	·220	·115
Mean for 1 in. ·075	·100	·100	·059	·033	·058

During the winter of 1873-4, I was entirely alone in my observations; but during the last summer, and the winter just past, I was fortunate enough to have the assistance of more than one scientific friend, who took an equal interest in the matter: with one of them I made many experiments as to the best method of melting snow, some of which will be found in Table V.

Table V.

Means of Five Measurements.

	Recently fallen snow	Time melting.	Recently fallen snow	Time melting.	Snow in enormous flakes just fallen.	Time melting.
	9½ in.	h. m.	9¾ in.	h. m.	6 in.	h. m.
Melted by adding an ascertained quantity of boiling water.....	0·620	...	0·630	...	0·180	...
Melted by adding an ascertained quantity of hot water	0·650	...	0·670	...	0·200	...
Melted in an Etna, with spirit lamp underneath	0·670	0 6	0·690	0 6	...	...
Melted in funnel in warm room, temp. 62°	0·680	3 0	0·700	3 0	0·200	1 45
Melted in open soup plate in room, temp. 62°	0·680	3 0	0·700	3 5	0·200	1 50
Melted in covered soup plate in room, temp. 62°.....	0·670	3 30	0·700	3 45	0·200	2 15

Before making any remarks on the tables, I must call attention to the fact, that snow, in this country, falls at all temperatures and in all forms as well as in different density. I have seen the air with a clear sky and a hot sun, full of minute particles of snow—*invisible* but for the sun. I have seen it from the most minute flakes up to the largest; the latter, in many instances, three inches in diameter and varying in density: and I have also seen a form of snow entirely new to *me*, viz., small hard globules, perfectly white, in size from that of mustard seed to that of a small pea, and crumbling to powder on pressure. I caught several as they fell, and examined them with a glass. Cut in half they shewed a minute nucleus from which rays diverged to the circumference; but in no case could I detect any sign of *ice* as in a hail stone.

Apropos of fine crystals, I may here mention that, on the 1st of January last, when the minimum had been —7° and the maximum of the day 4°, snow crystals were formed by the breath. The day was cloudless and still: not the slightest air stirring. We skated, a party of ten, the whole day, and the hair of all was covered with the most beautiful crystals, and the folds of the ladies' dresses were full of them. These and all other crystals that I examined with a glass were minute stars of different forms but invariably with six points.

Now with regard to the tables. Table I. was made so long ago that not having my records with me, I am unable to make any remarks upon it. Table II. shows that, during the months in which no snow or hail fell, there is absolutely no difference between the gauges; not even during the heaviest thunderstorms (of which we had during the summer 39 and during many of which nearly two inches of rain fell in a very short time). Table III. shows no difference in snow when the fall is small and during a calm; but in a heavy fall, and in *any* fall *with wind*, it shows a remarkable difference. Tables IV. and V. require no comment.

In making these observations, I have kept constantly in mind the article on this subject in *British Rainfall*, 1872. I have come to the conclusion that no one of the three methods of measurement named in Rule XV. is satisfactory.

The first—adding boiling water—is troublesome, may break your measuring glass, and is not entirely reliable.

The second—invert the funnel—does not answer unless the ground be frozen hard. It is only on a frozen surface of earth or gravel, where there is always more or less *ice*, that it answers. A tin plate or wooden board does not answer: I have tried both and the first fallen snow even in a temperature of 25° invariably melts. During my second observations of three years, I had two zinc cylinders 8 in. and 5 in. at work along side the gauges, and in no case after a fall of snow, was the depth in them as great as that on the surrounding ground: the yield, however, was generally the same as that of the inverted funnel, the cylinder retaining the first fallen and melted snow, which a flat tin or board would not. The yield, too, in almost all cases, both of cylinders and inverted funnel, was less than that of the gauge. I regret extremely that all these records, were, as I have before said, accidentally burnt.

The third method—measure with a rule and take one-twelfth—Table III. I think shows to be practically useless, there being a range of from one-fifth to one-fiftieth, owing to the variation in the density of the snow. To take a few for instances: a reference to the table shows that one inch yielded ·020, ·050, ·060, ·080, and ·110.—3·5 in. ·350 and ·740.—5 in. ·310, ·320, and ·430.—6·7 in. ·220—and 7·5 in. ·440 and ·580.

The question, therefore, now seems to be—What is the best plan to be adopted to ensure *accuracy*, and, above all, *uniformity* of observation? The *simplest* method must eventually be the one adopted, if these all-important desiderata are to be attained. Many observers

will not take the trouble to measure, or melt (otherwise than in the funnel), or to put out extra cylinders when snow is coming on, even could they know when it *is* coming.

I am aware that the opinion of an individual is of little moment. However, since the trials here, I have quite made up my own mind on the point; and, after nearly eight years of careful observation, I most unhesitatingly give my verdict in favour of the Snowdon Gauge for the following reasons:—

The ordinary gauge is useless in heavy snows. It barely holds three inches. In any fall with wind, it is also untrustworthy, as the snow whirls out of the funnel: this I can testify from many days' watching. It, therefore, requires either a super or an extra cylinder alongside. The fixing of these is a trouble, and it is doubtful whether they are fixed accurately, put down, as they may be, in a hurry when snow has unexpectedly come on.*

The rain gauge, once more, is not to be trusted in *hail*. In April and June, 1874, we had severe hail storms: on each occasion I saw the hail stones bound out of the gauge. The storm in June was of barely ten minutes' duration, and the yield, measured immediately after the fall, was, Snowdon ·040, Ordinary ·020.

The Snowdon gauge, on the other hand, answers in *all weathers*—it requires no supers or extra cylinders,—it will contain a fall of 7½ inches, which will, I think, be sufficient for ordinary winters in England,—and no measurement by rule or by inverted funnel, with its after trouble, is required.†

The gauge provides also for the contingency of rain and snow together; of rain turning to snow and *vice versâ* (a great point in our variable climate) and of hail: and, lastly, I venture to think its *not least* merit is, that you get your rainfall, throughout the year, whether in the form of snow, sleet, hail or rain, *in one and the same funnel.*

It may be objected that 1 ft. 6 in. is too high from the ground for the receiving surface. Cannot this be overcome? It seems to me that from the series of observations made at Rotherham by Mr. Chrimes, at Strathfield Turgiss by Mr. Griffith, and at Calne by myself, the

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* Apropos to *fixing*. I have found that wooden pegs do not keep the gauges level. In an alternation of rainy weather and frost, especially, they require frequent attention: it was for this reason that I adopted the iron holders, which after once being fixed correctly, require no readjustment.

† Table V. proves, I think, conclusively, that it is immaterial whether you bring the funnel itself into a warm room, or whether, in the event of snow still falling at the time of measurement, you empty the contents into any other vessel, covered or not.

difference between the fall due at 1 ft. 6 in. and that at the level of the ground, may be computed, and added either monthly or yearly to all observers' returns, in proportion to the amount of fall.

There is a decided objection to sinking gauges in the earth, as after a time the metal corrodes and rots, and in the event of an overflow of the bottle the measurement is lost. In snow, too, a gauge under 1 ft. 6 in. above the surface of ground might be buried.

There are two points worthy, I think, of notice by our rain gauge makers. One is that the brass rims of the funnel should be as sharp as possible, and as perpendicular *outside* as they can be made. It is wonderful how, in a continuous fall of snow, the bevel of the brass rim, small as it is, collects the snow, which settles on the edge on the side from which the fall comes. The snow, eventually, overhangs, and as the surface of the snow, so hanging, increases, more is deposited than is due to the area of the gauge, and eventually the whole falls into the gauge. This might, I think, be avoided by the present sloping bevel being abandoned and by making the edge sharp, as in fig. 3.

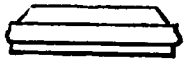


Fig. 2.

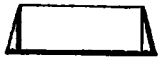
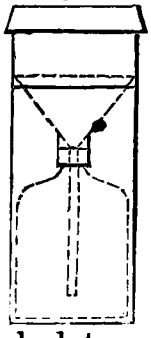


Fig. 3.

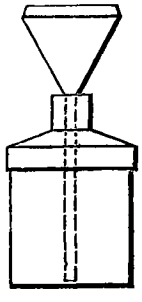
Fig. 4.



The other point is, that all funnels should have a cap to fit over the mouth of the receiving bottles either fixed on to the funnels or, perhaps better, loose caps on the neck of the bottle with a hole in the top just large enough to receive the funnel tube. During the hot weather, last summer, there was an immense deposit of moisture on the whole surface of the interior of the gauges, caused by evaporation of water in the receiver. I, therefore, had two caps made to fit the bottles exactly, and it ceased.

I think metal receivers are better than glass ones. The glass bottles, as now made, only hold three inches of water, and in the event of frost, after rain, in night, may break: this has happened several times. The metal ones, which I had made (zinc), are of the same height as the bottles, but larger in diameter, and they hold very nearly five inches of water. The brass caps, too, fit better on them, and there can be no evaporation. My only doubt is, whether, after a time, they might not corrode. Possibly one of the pattern of fig. 5 might be better, with the neck and shoulders to take off as a lid and then the interior might be cleansed from time to time.

Fig. 5.



Of course the lid must fit very closely, or there would be a chance of leakage when pouring out into the measuring glass.

The above remarks on the subject of the moisture deposited on the inside of the gauges, leads to that of evaporation. I believe that snow has the credit of evaporating more than it really does, and that the decrease in depth is due more to sinking and solidifying than to evaporation. I have observed by measurement that in 24 hours snow sinks, according to its density, from $\frac{1}{2}$ to $2\frac{1}{2}$ in. In the next 24 hours the sinking is hardly appreciable. I had a particular example of this in the falls of 7·5 in. and 6·7 in. in December, 1874, noted in Table III. when the snow sank in 24 hours to 5 and 4 in. respectively, yet yielded exactly the same amount of water as the day before, viz., ·440 and ·220. The following morning there was a very slight difference in the depth, and the yield was, respectively, ·435 and ·210. Table V. also shows that there is not much evaporation during melting in a warm room. *Boiling* water *does* cause it. When poured on the snow, the steam arising from it was considerably more than that arising from the boiling water itself. The table also shows that your correspondent, the Rev. J. Brooke, need have no fear for the safety of his saucepan in melting snow, my Etna, after all the melting experiments, being as sound as ever it was.

I have found, again, that snow melts more quickly in the copper than in the japanned iron funnel. The latter was nearly full during a heavy fall, with the temperature at 35°, while the snow in the copper funnel was nearly half melted. On bringing the two gauges into a room, after a fall of two inches, during a hard frost, and placing them near a stove, the snow in the copper gauge was melted in five minutes, whilst that in the iron one took fifteen minutes to melt.

In conclusion, the opinion of one person, as I have before said, is of little consequence, but your readers can judge for themselves from the tables, which I present as the result of much careful observation, not unassisted by others, for a long period of time. And I hope that they may contribute to the final adoption, as soon as possible, of *one uniform system* of rain and snow fall measurement; and one that will ensure the greatest amount of *accuracy* with the least amount of waste of *time* and *trouble*—many observers not having the former to spare, whilst others have not the inclination or health for the latter.

I would make one more suggestion, which is, that greater accuracy in measurement would be ensured, if all measuring glasses were graduated, as mine at home are, on both sides.

Rossinière, Canton Vaud, Suisse.

ON RAIN GAUGES.

By E. E. Dymond, Esq., F.M.S.

For a long time I have been impressed with the idea that the various gauges commonly supplied to observers were marred by serious defects, and that in consequence—chiefly of the form of the receiving funnel and, in a less degree, of the position of the collecting bottle—a considerable quantity of rain falling, especially when in its frozen forms, or when accompanied by a high wind, is lost to the observer.

It has now, I think, been pretty generally agreed that the upper edge of the receiving funnel should be placed at 12 or 13 inches above the ground, and the great bulk of the gauges supplied have accordingly been constructed so that when standing on the ground their tops shall be at that height. The funnel is placed immediately under the ring, and the collecting bottle, whether inside a metal case, as No. XI. or No. XII., B. A. Report 1866, plate, or entirely unprotected, as in Howard's pattern, stands on or near the ground.

This construction, as it seems to me, involves two radical errors—First, from the funnel being made to slope away immediately below the ring, hail is apt to bound out, rain, especially in heavy storms, or when wind-driven, will splash out, and snow will be whirled out after it has fallen.—Second, after the rain, or what remains of it, has been got into the collecting bottle, it is liable to evaporation from the heat to which it is exposed. The first cause is in operation all the year round, the second is, of course, most active in the summer months.

Endeavouring to avoid these two sources of error, I had a gauge made of japanned zinc of which I send a sketch. It will be seen that the funnel is placed at a distance of five inches below the ring; this should, I think, be the minimum, though placing it down lower still would not be a disadvantage; by this means I hoped to avoid loss by out-splashing. For the avoiding the other source of error, I placed the receiving bottle at a depth of two feet underground.

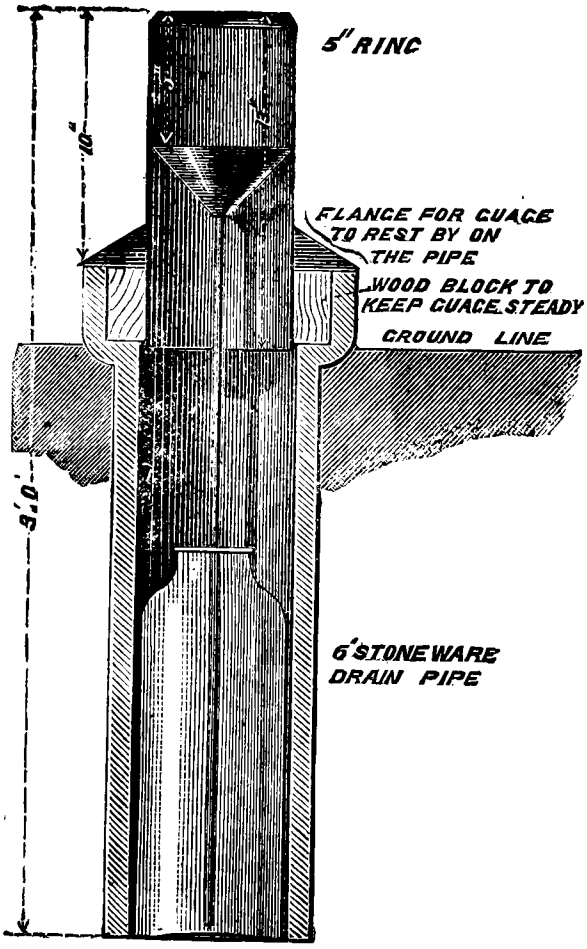


Fig. 6.

This gauge I set up at a distance of 12 feet S. from the one (No. XII.) which I had been for some time using, and read both daily from the 10th September to the end of the year; during which time 49 observations were made. In September there were eight, of which the old gauge read higher three times, the remainder being alike. In October 16 observations, the old reading higher seven times the remainder alike. In November 14 observations, the old reading higher five times, the new once, the remainder alike. In December 11 observations, the new reading higher five times the remainder alike. Of the 15 observations in which the old gauge read higher, there was a difference of ·01 eleven times, of ·02 three times and of ·03 once. Of the six in which the new read higher, there was a difference of ·02 three times and of ·01 three times.

During this time the rain in the old gauge was many times frozen,

that in the new one never, although from the 13th to the 31st December, inclusive, we had min. temp. always below 28° and three times below 18°.

In January I began to read the new gauge monthly, except that I specially noted the 1st. There were 19 days rain, the old gauge, read daily, made altogether 2·46, the new 2·78. On the first of January, on which day the frost broke up with a strongish wind E. by S. veering to W. by S., accompanied first by frozen and afterwards by liquid rain, the readings were, old ·46, new ·58.

In February there were 12 days rain, the old gauge collecting ·92, the new ·96,

In March eight days rain, the old collecting ·61, the new ·62.

On the 3rd and 4th April, with a good deal of wind, the old collected ·08, the new ·10.

I attribute the higher readings of the old gauge during September, October and November to the difference in the condition of the funnels, the old being oxidised, the new one bright, and keeping the drops standing on it.

These results seem to suggest the desirability of further observations, and it would, I think, be well to set up a series of four gauges, consisting of a 5 in. ordinary pattern (say No. XII.); a 5 in. ordinary, but with the collecting bottle placed underground; a 5 in. with deep receiver and bottle above ground; and, a 5 in. with deep receiver and bottle below ground. To determine the difference of temperature to which rain is exposed after collection, one of the above ground and one of the below ground bottles should be accompanied by a Six's thermometer, hung inside the case, and there should be an anemometer and wind vane fixed near the set. One measuring glass should be used for all, and it would be better if it were graduated to ·005. The readings should be taken daily for half-a-year, at least, so as to include every variety of weather, and the time during which the rain falls should be noted whenever possible.

I think a consideration of the observations so made, would enable us to determine which form of gauge it would be best to adopt for the future, and to ascertain the co-efficients by which the readings of the various forms of gauge of this size may be reduced. Co-efficients for the various sizes in use having been already ascertained, we should then be able, on knowing size and pattern, to reduce all observations to a uniform standard.

I have been told that my proposed arrangement of gauge is incomplete as I make no provision either for keeping rain out of the drain

pipe or getting rid of it when there. In my own case, I have found no need for such provision; a light sand subsoil for 100 ft. or more in depth relieves me from all fear of finding my collecting bottle afloat in the pipe; * * I have merely put a piece of slate at the bottom for it to stand on. In a stiff clay, I should recommend closing the collar end of the drain pipe with a tile fixed with cement, putting that end downwards, letting the gauge rest on four stakes driven close round the pipe and adding to the outer edge of the flange a ring, 2 in. wide turned down all round them.

NOTES ON THE TWO PRECEDING PAPERS.

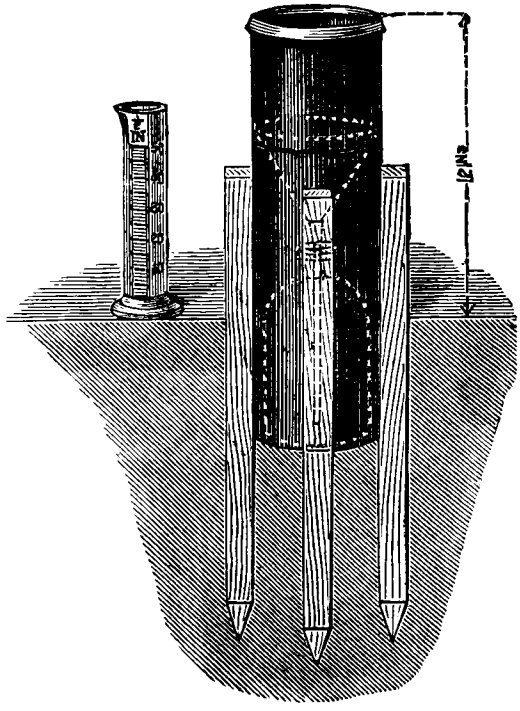
By the Editor.

Doubtless the proper sentiment wherewith to open these remarks would be that of thanks to the two authors for their communications, and especially to Col. Ward for the very great trouble he has taken with the snow question and for the lucid way in which he has described his experiments. No one can, or at any rate certainly the authors will not, doubt my appreciation of their work, and yet I think it is rather for the result thereof than for the work itself, that all who desire the success of rainfall investigations should be thankful. I think that the result is extremely important, because it goes far towards, though it does not actually reach, the solution of two disputed questions; (1) the measurement of snow; (2) the best pattern for rain gauge receivers.

I quite agree with Col. Ward that the rules suggested for snow measurement are not good, and I also agree with him that it will never do to adopt for universal use any method which involves prescience of the fall of snow, and special arrangements for its measurement. I agree also that the Snowdon pattern gauge is a very useful instrument in snowy weather, but I cannot well say as much in its praise as others can, since it was a proposal of my own. Not that it matters much who

first suggested it, or indeed that it was new in 1864, but it certainly was not usual in this country. I have not pressed its general adoption, because I have been doubtful as to its minus error in the summer exceeding its gain in the winter; but, Col. Ward's tables seem to dispose of that objection, and if so, it only remains to adopt it for all new stations. It may be as well to mention that in 1866 the same pattern was used for the eight-inch mountain gauges in the Eastern Lake district, and a few years afterwards by the Meteorological Committee for their stations. Lastly, in the autumn of 1874 I issued a very large number of five-inch gauges of the pattern represented in Fig. 7, to the new stations in Ireland, equipped at the cost of the British Association

Fig. 7.



It seems to me that Table I. conveys much more information than is evident at first sight; I have in the following table grouped the differences according to the months, and the result is to show that in the spring the ordinary gauge usually exceeded the Snowdon, while in the winter the difference was almost always in the opposite direction—and this is just what was to be expected, for the Snowdon gauge is in excess in those months which have most wind and most snow, and therefore in those in which it is most probable that the ordinary gauge collects too little—and the Snowdon is slightly deficient in those

months (March to May) when short showers are most frequent and when they are interspersed with sunshine, in just such proportions that

Abstract of Table I.

	1865.	1866.	1867.	1868.	Sums.	Means.		
January	...	·224	·190	·007	·421	·140	·144	
February.....	...	·242	·205	**·003**	·444	·148		
March	...	·143	**·250**	...	**·107**	**·053**	**·027**	
April	**·088**	**·002**	·087	...	**·003**	**·001**		
May..... ..	**·086**	**·008**	**·017**	...	**·111**	**·037**	·000	**·003**
June	·021	·040	·050	...	·111	·037		
July.....	·053	**·013**	**·040**	...	·000	·000	·017	
August	·084	·021	**·006**	...	·099	·033		
September	·028	·159	·014	...	·201	·067	·106	
October	·327	·075	·031	...	·433	·144		·136
November	·139	·345	·000	...	·484	·161	·159	
December	·193	·205	·070	...	·468	·156		

The Egyptian figures show the excess in the ordinary gauge, in all other cases the Snowdon gauge collected most.

the loss by evaporation from the large relative surface of the Snowdon pattern becomes sensible. According to this table the two gauges agree almost precisely for the average of the six months (March to August, inclusive), and during the other six months there is an average excess of 0·136 in the Snowdon pattern. If (and it is by no means certain) these gauges were each absolutely correct, the result is that the Snowdon pattern exceeds the ordinary by an average of 0·067 in. per month, or 0·80 in. per annum. This difference will be greater at stations where much snow falls, and less at those where alternations of sunshine and showers are frequent. And this is borne out by Table II.

There is one minor point on which I cannot agree with my friend the Colonel. He writes, "There is a decided objection to sinking gauges in the earth, as, after a time, the metal corrodes and rots, and in the event of an overflow of the bottle the measurement is lost." Assuming that by the expression "after a time" he means a few years, I am afraid I must differ from him. I have a japanned tin gauge which has been in the ground (save one day when I raised it to receive a coat of paint) for six years, and a copper (unpainted) one which has been down nearly twice as long, and both are perfectly water tight. Probably the rate of corrosion depends on the metal, the soil, and the climate.

I am very glad to see how strongly the Colonel supports vertical rims; I have done so on account of the prejudicial effect of the bevelled

rims on rain drops, his remarks respecting their action in snow, strengthen my arguments.

Metal receivers may be better than glass ones, but I am not sure that they are ; one cannot empty them so perfectly, especially after they have become oxidized.

The only other point on which I do not perfectly agree with the Colonel is in the recommendation that all glasses should be divided on both sides. I have tried this plan, but I think it is not so good as that which Col. Ward adopted at Calne, where he had a small table fixed absolutely level, and placed all his glasses on that table to read them. I believe that that plan afforded excellent results, and I know that the division on both sides though it generally (in good hands) leads to accuracy, is sometimes very mischievous, as observers occasionally read from (say) 0·35 on the one side on to 0·36 on the other side, thus creating the very error the arrangement was designed to annul.

In the above remarks I have almost exclusively confined myself to mentioning points on which I do not perfectly agree with Col. Ward, but it must not be assumed that I disagree with his valuable paper as a whole, for I do not. On the contrary, it appears to me very good, and I concur in his conclusion that the adoption of a deeply sunk funnel, "Snowdon pattern," is inevitable.

Mr. Dymond appears to have arrived, by quite a different method, at very nearly the same conclusion as Col. Ward, a fact which is equally fortunate and satisfactory. I am glad to see the last paragraph of his paper, because otherwise I should have been obliged to declare the arrangement of an open-ended drain pipe impracticable. In a clay soil the bottle would be constantly swimming about. If Mr. Dymond has the requisite time and is so inclined, it would seem desirable to carry out the comparison he suggests ; even if it only proved what loss does occur by evaporation, it would repay the cost, and what is far more, the trouble.

Comparative observations with the old and Snowdon pattern have also been made at the Heath House, Cheadle, by Mr. J. C. Phillips, with the result of convincing him of the desirability of adopting the latter. Probably this is exceptionally necessary at that station, because of its altitude, of the considerable falls of snow which occur there, and of the partial eddies which are produced by S.W. winds striking its somewhat extensive front.

THE ROTHERHAM EXPERIMENTAL RAIN GAUGES.

DURING the year 1874 these instruments were presented by Mr. Chrimes to the Corporation of Rotherham, and erected, by their direction, at their Waterworks reservoir, at Ulley, where they have been continuously observed since June by the manager, Mr. L. Berry, who has kindly forwarded a copy of the daily values. We only refrain from printing an abstract, such as we have given in previous years, because it seems better to postpone it until next year, before which time we hope to receive photographs of the instruments in their new position, and full details of the fresh arrangements.

RAINFALL AT THE ROYAL OBSERVATORY, GREENWICH.

Lat. 51° 28′ 38″ N. Long. 0° 0′ 0″

Communicated by Sir G. B. Airy, K.C.B., D.C.L., &c., Astronomer Royal.

1874	MONTHLY AMOUNT OF RAIN COLLECTED IN EACH GAUGE.							
	Self-registering Gauge of Osler's Anemometer.	Second Gauge at Osler's Anemometer.	On the roof of the Octagon Room.	On the roof of the Library.	On the roof of the Photographic thermometer shed.	Crosley's.	Cylinder partly sunk in the ground. read daily.	Cylinder partly sunk in the ground read mntly
	in.	in.	in.	in.	in.	in.	in.	in.
Jan....	0·47	0·49	0·76	0·78	0·96	...	1·00	1·00
Feb....	0·58	0·55	0·65	0·62	0·91	...	0·94	1·01
March	0·12	0·11	0·33	0·33	0·43	...	0·45	0·58
April..	0·72	0·69	1·05	0·89	1·28	..	1·35	1·33
May...	0·30	0·32	0·36	0·42	0·43	...	0·42	0·50
June...	1·78	1·82	2·13	2·38	2·43	...	2·42	2·43
July...	2·06	2·16	2·40	2·47	2·62	2·84	2·59	2·38
Aug....	0·97	0·95	1·18	1·08	1·44	1·87	1·44	1·42
Sept...	1·63	1·74	2·00	2·28	2·23	2·53	2·22	2·40
Oct. ...	2·60	2·73	2·96	3·39	3·54	4·37	3·58	3·60
Nov ...	1·20	1·27	1·42	1·59	1·77	2·14	1·85	1·78
Dec. ..	0·71	0·73	1·12	1·32	1·59	1·90	1·69	1·75
Sums..	13·14	13·56	16·36	17·55	19·63	..	19·95	20·18

The heights of the receiving surfaces are as follows :

	Above the mean level of the Sea.		Above the Ground.	
	ft.	in.	ft.	in.
The two Gauges at Osler's Anemometer	205	6 ...	50	8
Gauge on the roof of the Octagon Room	193	2½ ...	38	4½
Gauge on the roof of the Library	177	2 ...	22	4
Gauge on the roof of the Photographic Thermometer Shed	164	10 ..	10	0
Crosley's Gauge	156	6 ...	1	8
The two Cylinder Gauges, partly sunk in the ground ...	155	3 ...	0	5

G. B. Airy,

RAIN GAUGE EXPERIMENTS AT ALDERSHOT CAMP, HAMPSHIRE.

Lat. 51° 15′ 25″ N. Lon. 0° 45′ 36″ W. Height above Sea, 325 ft.

FOR THE YEAR 1874.

Height above ground	0ft. 0 in	0ft. 6 in	3 ft.	6 ft.		12 ft.	25 ft.	30 ft.	Days on which ·01 or more fell.	Mean amount of horizontal movement of air.
Diameter of Funnel..	8 in.	8 in.	5 in.	5 in.	5 in. tilted at 45°	5 in.	8 in.	5 in. tilted at 45°		
	in.	in.	in.	in.	in.	in.	in.	in.		miles.
January	1·88	1·82	1·79	1·71	2·69	1·59	1·41	2·72	20	283
February	2·34	2·27	2·20	2·12	3·45	2·02	1·78	3·43	16	209
March ...	0·50	0·48	0·48	0·46	0·64	0·44	0·37	0·65	9	272
April ...	2·51	2·46	2·39	2·21	2·72	2·02	1·86	2·73	13	248
May.....	0·84	0·82	0·80	0·77	1·16	0·68	0·63	1·17	10	201
June ...	2·46	2·43	2·33	2·21	2·83	2·06	1·93	2·81	10	218
July.....	1·43	1·38	1·35	1·30	1·73	1·24	1·19	1·73	7	208
August..	2·50	2·41	2·35	2·24	3·12	2·09	1·89	3·15	14	226
Sept. ...	3·06	2·98	2·89	2·72	3·89	2·59	2·33	3·92	16	258
October..	4·80	4·71	4·55	4·34	7·02	4·07	3·79	7·04	23	254
Nov	2·28	2·20	2·15	2·04	3·10	1·93	1·85	3·11	14	247
Dec.....	2·57	2·55	2·50	2·36	3·93	2·22	2·10	3·95	13	252
Totals ...	27·17	26·51	25·78	24·48	36·28	22·95	21·13	36·41	165	Mean 240

J. ARNOLD, F.M.S.,
Colour-Sergeant, A.H.C.

CHRONICLE OF NEW STATIONS ESTABLISHED, AND CHANGES IN THE PERMANENT STAFF OF OBSERVERS, DURING THE PAST YEAR.

With such a large staff as that of the observers of rainfall in the British Isles, it is impossible to issue a *perfect* chronicle of the changes which occur, for scarcely a day passes in which some alteration has not to be entered in our MS. indexes. All therefore that can be done is to draw up a short narrative, correct to the best of our knowledge and belief, but not guaranteed to be so absolutely, and giving only the more important changes. Moreover, it must be read in conjunction with the tables of imperfect and missing returns, which follow the general tables at the end of the volume, for it is self-evidently undesirable (as a general rule) to say the same thing twice over.

Lastly, if new observers, or the directors of new stations, find that their efforts are not noticed, we shall be glad if they will remember that Editors are but mortals. Therefore it does not follow that if some special effort (such for example as that of Mr. Hughes in planting a gauge on the top of the Cheviots) passes without comment, it is therefore regarded as of no moment. Considering the extent of the organization we have the honour of directing, it is quite possible that some things done both wisely and well, may temporarily escape our memory—*Humanum est errare.*

MIDDLESEX.

The death of Mr. Charrington has left the East of London without an observer; one in that neighbourhood would be useful, and also one each at or near Staines, West Drayton, Uxbridge, and Southall. The removal of Mr. Paulin from Winchmore Hill to Enfield Chase is to be regretted, as breaking his series of observations, but the new locality requires a station more than the old.

SURREY.

No important change has occurred in this county. A few new stations in the extreme east, and near the centre would be useful.

There are two new stations near Dorking, and if they and existing ones are continued for a few years it will be possible and desirable to work up all the records and to study the effect of the abrupt rise of the chalk hills to the N.W. of the town.

KENT.

This county has eight additional perfect records for 1874, while it has only lost two old ones. It is now well provided with stations except on the shore of the lower part of the Thames, and in the Isle of Sheppey.

SUSSEX. (F. E. Sawyer, Esq., Buckingham Place, Brighton.)

Here the losses far exceed the gains, and one of them is a serious one, viz., the interruption of the series of observations at Chichester Infirmary, which date back to 1838, and were the longest perfect series in the county. Fortunately, there are two other good and long registers at Chichester, Shopwyke dating back to 1850, and Westgate dating back to 1854. Up to the present moment we have not received the records from Fulking and the Dyke House; we hope that they will arrive before the tables are printed, as they are very important stations and we believe very carefully observed, besides being well placed.

HAMPSHIRE. (Rev. C. H. Griffith, Strathfield Turgiss, Winchfield.)

The alterations in this county are not very material. We are still without returns from the West of the Isle of Wight.

HERTFORDSHIRE.

The new station at North Mimms is rather an acquisition, being 6½ miles from the nearest pre-existing one, *i.e.*, there was an area of more than 133 square miles without a gauge. Another important gauge is the new one at Rothamstead, but we postpone notice of that, hoping on a subsequent occasion to describe the very important experiments in progress there.

BUCKS.

A new station is needed in the west of this county, and also in the neighbourhoods mentioned last year.

NORTHAMPTON. (H. Terry, Esq., Northampton.)

We regret the loss of the station at Potterspury, but in all other respects this county is (as mentioned on p. 8) going forward. Many new stations have been started, and we believe that the instruments are as good as is their supervision. The requirements mentioned in our last have been met.

HUNTINGDON.

It is fortunate that this county is flat and uniform in its physical features, for it has lost one (Waresley) of its previously limited staff of observers. New stations are much needed both on the E. and W., and one also is required in the extreme N.W.

BEDFORDSHIRE.

There has been no response to our request for new stations in the N. of this county, and as that at Eversholt appears to be discontinued a fresh one in the extreme south would not be superfluous.

CAMBRIDGE. (S. H. Miller, F.R.A.S., Wisbeach.)

This county is now tolerably well provided with stations, but about four others would be acceptable, one near or N.E. of Caxton, one W. and one N. of Ely, and one W.N.W. of March.

ESSEX.

The stations in this county are well distributed, and the addition of Castle Hedingham completes the northern portion. We should, however, be glad to receive records from the places mentioned last year, viz., Ongar, Burnham, St. Osyth, and Thaxted.

SUFFOLK.

A new station has been started at one of the places which we mentioned last year, viz., Halesworth, but in other respects there is no alteration.

NORFOLK. (Rev. J. M. Du Port, M.A., Mattishall Vicarage.)

There have been several changes in the stations in this large county. They are sufficiently numerous, but are rather too close in a belt pass-

ing E. and W. through Norwich ; if a few could be moved five or ten miles north and south, it would geographically be an improvement. At the same time, we admit that if all the counties were as well provided as Norfolk, very little more would remain to be done, except of course to keep them so ; and that, with constant deaths and removals, is the main difficulty.

WILTSHIRE.

The Rev. T. A. Preston has kindly obtained a station at Pewsey, which partly fills the blank noticed last year, but only partly. We should be very glad of stations near Devizes and Malmesbury.

DORSET.

We have thirteen records for this county, and they are tolerably well distributed, but as it contains nearly 1000 square miles, it is obvious that the staff is not excessive. On the contrary, we should gladly accept records from any of the localities mentioned last year, not one of which has yet been supplied.

DEVONSHIRE.

This county has suffered a loss of precisely equal importance with that of Sussex. The Rev. W. Heberden has removed to London, and the Broadhembury record, which he had kept without a single break for thirty-seven years, is terminated. Records such as these are the backbone of rainfall work, and all who understand the character of the problems with which we have to deal, will unite with us in paying the tribute of our thanks to Mr. Heberden for the services he has rendered.

We rather fear that we have another loss to chronicle of nearly equal importance, and singularly enough from the same neighbourhood. Up to the present moment we have received no reply to several communications addressed to the observer at Bradninch. We will, however, hope on until another year has passed.

Lastly, we have to record the termination of a record longer than either, in fact one of the longest continuous ones in the country, viz., West Street, Tavistock, which extends over just half a century. The record, however, loses much of its value from the peculiar (not to use too strong a word) form of rain gauge used. It was the smallest we ever knew to be employed, except for experiments, its receiving area being only *one inch square*. The results of its examination on Sept.

8th, 1869, are given in the *British Association Report*, 1870, p. 214, No. 349, and thence it appears that it had an error of about 5 per cent. indicating in excess of the truth; as, however, it was mounted on a post with its receiving surface 4 ft. 6 in. above the ground, this plus error would tend to bring its indications nearer the truth than they would otherwise have been. Moreover, the gauge and position having been the same throughout, its indications are available as regards questions of secular change.

The other losses are mostly of recently established and not very important stations, but some, Totness for instance, tend to spoil the equality of geographical distribution at which we aim, and which we are rapidly approaching.

Respecting the new stations, 13 in number, we can only say that all are useful, and that that at Lynmouth is extremely important.

CORNWALL.

There is only one return missing from this county, while there are quite a little staff of new or resumed observers. By far the most important is St. Ruan Rectory, near the Lizard; next to it is probably South Petherwyn, Launceston. We do not quite understand the small amount recorded at the new station at Lansdowne Road, Falmouth; as we believe the gauge to be correct and the readings carefully taken, we think that there must be something unusual in the position of the gauge.

SOMERSET.

At last we are driving stations in upon Exmoor. There are few parts of the British Isles which have for years given us such profitless trouble as Exmoor, but at length we have succeeded, and the Rev. J. G. Howes is keeping a record at Exford Rectory, in the very centre of the Moor. We have also a perfect record for 1874, from the Priory, Dunster, in the N.E., and Mrs. B. Boucher is kindly continuing her late husband's records in the E.S.E., while on the Devonshire side we have Huntsham Court on the S.E., and Lynmouth on the N.W.

GLOUCESTER.

Three good observers have been removed from us by death during the past year—Mr. J. Hutchinson, of Cowley Manor, Cheltenham; Mr. J. Curtis Hayward, of Quedgeley House; and General Drum-

mond, of Boyce Court, Dymock. The longest of these records is that at Quedgeley, which extends to 1849, and this, we are glad to say, will be continued (although, unhappily, imperfect for 1874) by Mr. Hayward's son. The other two records are terminated, and this, as regards Boyce Court, is greatly to be regretted, as we have no station in that immediate neighbourhood.

HEREFORD (Rev. Nash Stephenson, The Vicarage, Bromyard.)

It is quite clear that the good folks of this county are resolved to set an example to others of the way that the rainfall system should be carried out. They have (1) a very active and able superintendent,* (2) a very useful assistant in Mr. Isbell, who is most zealous in determining the altitudes of the stations, a very troublesome matter, as the Ordnance officials have as yet done very little in the county; (3) a powerful newspaper, which is ever ready to assist any scientific work. And having these advantages, they have not rashly started gauges indiscriminately, but have gradually increased the number by adding stations, well spread over the county.

SHROPSHIRE.

The most important loss is that of the record from the Industrial School at Quatt, near Bridgnorth, but, as will be seen from the abstract of missing returns, there are several others. A new station is much needed in the Forest of Clun.

WORCESTERSHIRE.

There has been no change in the stations in this county, which, though not numerous (12 for 729 square miles) are very well distributed.

WARWICK.

The record from Alcester has not yet arrived; if it is discontinued, a fresh one must be promptly sought for; a new station is also required south of Rugby and east of Coventry, about six miles from each would be best. In other respects the county is well provided.

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* We regret that space prevents our reproducing the capital letter on the rainfall of Herefordshire, in 1874, written by Mr. Stephenson, and printed in the *Hereford Times*, but we recommend its perusal to our readers.

LEICESTER.

The alterations in this county are unimportant, except as regards the loss of the old established station at Wigston, which Mr. Burgess's family decline to continue. This is the more to be regretted, as no other station in the county dates back beyond 1855.

RUTLAND.

No returns are missing, and one new one has been received (from Tolethorpe Hall). This county is now amply provided.

LINCOLN.

There are many additions to the list of stations in this large county, and there is only one (unimportant) missing; but the additions are too frequently near to existing stations, and therefore they serve only the minor purpose of confirming the accuracy of the old stations. A station between Sleaford and Tattershall is much required, and others at Wainfleet, Saltfleet, and Kirton would be useful.

DERBY.

We have here the rare case of a long and valuable record being, by one who had, so to speak, inherited it and continued it for three years, abandoned, on the simple ground that it required too much time. And thus the Derby record, of which the late John Davis was so proud, and which he kept without a break for thirty years, is allowed to pass into the list of what has been. The other alterations in the county are not very important, but we wish that some one would find an observer in the west of the county, say between Ashbourne and Tideswell.

LANCASHIRE.

The records from this county are about the same in number as in previous years, and neither the losses nor the gains require special mention. We are glad to find that nearly, if not quite, all the stations started by Mr. Bywater have been carefully attended to throughout the year.

YORKSHIRE.

When writing upon this county last year we called attention to the fact that the northern portions of the West Riding were "not so well

provided as they should be. In years not perhaps very remote an accurate knowledge of the rainfall of these northern dales will be of considerable importance." Before twelve months had elapsed the rainfall of this identical district became a point in dispute; we were called upon for a report respecting it, and were obliged to acknowledge that there was a district, perhaps 200 miles in area, without a station, and that the only possible method of determining the mean rainfall was by careful consideration of that at surrounding stations. This referred to the extreme N. of the county, just south of which lies the Wensleydale district, where Mr. Stow has organized a system far surpassing even our expectations of what he would do. However, as he has kindly drawn up a short notice upon the subject, we have the pleasure of giving his words instead of our own.

NEW GAUGES, &c., IN WENSLEYDALE.

By Rev. F. W. Stow, M.A., F.M.S.

I have been asked to write a few words about the establishment of new gauges in Wensleydale. This name is given to the valley of the Yore or Ure (which gives its name to York), from the sources of that river as far as a little below the village of Wensley, a distance of about 25 miles. The district has an area of 100,000 acres, of which 81,000 are in the old parish of Aysgarth, 15,000 in that of Wensley, and 4,000 in that of West Witton. The hills on both sides of the valley rise to the height of from 1,800 to 2,350 ft. The rainfall throughout this district is considerable, but probably twice as great at the upper end of the valley as at the eastern extremity. Hitherto, there has been only one rain gauge in the whole district, although a register was once kept for some years at Hawes. Mr. Symons paid me a visit in October last, and inspected the gauges which I had established up to that time. In order to meet the difficulty of obtaining observers in the wilder parts of the district, Mr. Symons allowed me to order, at his expense, half a dozen monthly gauges of a new pattern. The mouth is only three inches diameter, but the lower part of the gauge consists of a cylinder of about five inches diameter, capable of containing a Winchester quart bottle, which will hold 20 inches of rain. The funnel is of copper, and is surmounted by a very strong upright turned rim of copper or brass, four inches high. The rest of the gauge is of strong zinc. These answer admirably. The extreme

length of the gauge is 21 inches, so that it goes nine inches into the ground, and the water collected is not easily frozen. One which I visited on the 22nd December, at a station 1,100 ft. above sea level, contained six inches of water, and not a particle of ice, although the thermometer stood at 12° when I reached home, the snow being level with the rim of the gauge. So far as I have tried them, the loss by evaporation appears to be small: it amounted to about ·15 inches last July, which was a dry and hot month; and of course the wetter the month, the less not only the proportional, but the actual loss.

Other gauges belonging to me, nearly all of them with high rims for catching hail and snow, and two of the old "magnitude series," the property of Col. Ward, were called into requisition, Mr. Symons providing such measuring glasses as were required.

The following is the complete list of the stations. It will be seen that we have in all ten daily and six monthly gauges in operation and one yet remaining to be started. Unfortunately I found it impossible to start them all by January 1st; the gauges not being all ready before the frost set in in November, I naturally put off fixing some of them, in the hope that the weather would improve, and when that hope was abandoned, I was prevented by circumstances of a private nature from doing anything in the matter till some days after the new year had set in.

All these 17 gauges are first-rate instruments, all but three being absolutely correct; and if all, or even a fair proportion of these gauges, are well observed, we shall possess a very complete knowledge of the rainfall of Wensleydale, and the tributary valleys of Bishopdale and Walden. It will then be possible to compare the known rainfall with the amount of water discharged by the river. Behind my house the channel of the river is narrow, the banks are steep, and the current is rapid, and I do not apprehend much difficulty in determining the cross section of the stream approximately. I have had an iron pipe erected in the river with a scale of feet on it, and I have ascertained the velocities corresponding to different heights on the scale (which rejoices in the euphonious name of *potamometer*). A reading is taken every morning, which, when the cross section is once determined, will give all that is necessary for determining the discharge. The area drained by the Yore above that point is well-defined, and the situation certainly presents unusual facilities for what may prove, if time and opportunity permit me to undertake it, an interesting investigation.

List of Gauges.

Station.	Observer.	Daily (d) or Monthly (m)	Height above ground.	Height above sea.	Diameter of Gauge.	Owner of Gauge.	Description of Position.
			ft.	ft.	in.		
Hestholm	Rev. F. W. Stow ...	d	3	467	12	F. W. S.	Kitchen garden.
,, ...	,, ...	m	1	465	5	F. W. S.	On lawn.
Carperby	Mr. J. Willis	d	1	720	6	M. F. W.	Kitchen garden, hill behind to N., level to E., S. and W.
West Burton ...	Mr. T. F. R. Hammond	d	1	605	8	M. F. W.	Garden, wall 15° S.W.
Walden ..... (Nell Bank)	Rev. F. W. Stow ...	m	1	1,100	3	G. J. S.	Kitchen garden, nearly level, but on steep hill-side sloping towards W.
Walden Head ..	Mr. Bentham.....	d	1	1,050	3	F. W. S.	In kitchen garden in level bottom of valley house 25° W.
,, ...	Rev. F. W. Stow ..	m	1	1,050	3	G. J. S.	
Bishopdale ..... (Kidstones)	,, ...	m	1	995	3	G. J. S.	At head of valley in garden, ground sloping to N.E., house 25° S.
Thornton Rust.	Mr. Pearson..... ..	d	1	840	5	F. W. S.	In walled garden.
Askrigg	Rev. C. Whaley.....	d	1	725	5	F. W. S.	Do. Trees 30° to N.E.
Marsett.....	....	m	1	900?	3	G. J. S.	Not visited.
Summer Lodge.	Mr. Jas. Broderick...	d	1	1,100	5	G. J. S.	In garden.
Hawes	Rev. J. D. Parker...	d	1	806	5	J. D. P.	In Vicarage garden.
Hardraw	Rev. R. Pinck..	d	1	790	5	F. W. S.	Do.
Lunds ... -	.....	d	1	1,000?	5	F. W. S.	In farm house garden, observed by farmer.
Lunds Church..	Rev. R. Pinck	m	1	1,050?	3	G. J. S.	Near the Church.

Hestholme, Bedale.

In the East of the North Riding we have not now a Mr. Stow, and matters, therefore, do not progress so fast; still there is progress, in spite of the loss of two important stations. Danby has been stopped by the illness of the observer, and Beadlam Grange by Mr. Phillips' removal. On the other hand, we have four useful new stations, and the promise of others during the present year.

DURHAM.

No important change. More stations in the west of the county are very necessary.

NORTHUMBERLAND.

The stations in this county remain much the same, both in number and as regards their geographical distribution. We have lost Shotley (through the frost in December), Keilder, Otterburn, and N. Sunder-

land, against which we have perfect records from the following additional stations:—Bingfield House, Hesleyside, Cragside, Rothbury, and Middleton Hall, Wooler, besides imperfect ones from Byrness and from Mr. Hughes's new station at Broadstruther, 1693 feet above sea level.

CUMBERLAND AND WESTMORELAND.

The alterations in these counties are unimportant, and their tendency is generally favourable. The largest district now without an observer is that embraced by a line from Appleby to Penrith, thence to Carlisle, across to Alston, and thence back to Appleby—probably an area of more than 200 square miles. It would be very instructive to search the Pennine chain from Gilsland to Kirkoswald for positions similar to those of stations in the Lake District, and to compare the results. It is an enquiry which would require much time and care, but if we could ascertain how far the air required to travel after passing the Lake District before it resumed the hygrometric condition which it had before being chilled by those mountains, we might obtain valuable data as to the vertical movement of vapour in the atmosphere.

MONMOUTH, WALES, AND THE ISLANDS.

In this analysis of progress and of retrogression, it is always best to consider our losses first, and then see what is to be set against them. The most important loss is that of Cefnfaes, Rhayader, caused by the ill health and age of the observer; the loss is of little consequence from a geographical point of view, because we have a good station near (Nantgwillt), but the Cefnfaes register reaches back to 1858, which (short as is the period compared with others noticed in this article) is the longest perfect record in the county, or indeed in that part of Wales. We have also lost Presteign through the illness of Captain Hannam, and Llanwrtydd through the removal of the observer. It is very desirable that a good observer be at once obtained residing in the country round Llanwrtydd, for there is not one near.

Turning now to the other side of the question, we are glad to find that the gains far outbalance the losses. Proceeding from south to north, we have first to call attention to the very important position of Stackpole Court, Pembroke, within a mile or two of the extreme S.W. of Wales. For this useful station, and also for the next on our list, Golden Grove, in central Carmarthen, we are indebted to Lord Emlyn. The next is Goggerddan, a mile or two N.E. of Aberystwith, kindly forwarded by Sir Pryse Pryse, Bt., and especially acceptable since all our observers in the town have failed us. Then there is a new station at Tybrittle,

which will be a useful check on our own at Capel Carno. As we go further north, new stations come closely, so that we must refer our readers to the general tables. The fact probably is that the influence of our valued Denbighshire superintendent (Whitehall Dod, Esq., of Llannerch Park,) has extended into the adjacent counties. Two of his new stations are quoted in this year's tables, but the majority were only started during 1874, we therefore think that it will be best merely to express our thanks for his valued help, and next year to give such maps, &c., as may be necessary to appreciate perfectly the returns which we shall then be able to give.

There is one station quoted which we cannot pass over in silence, Pen-y-gwryd, which Major Mathew has succeeded in keeping in order, and which for the first time has enabled Wales to boast (if it is desirable to do so) of having more rain than Cumberland; Pen-y-gwryd had 149·00 in., and a gauge of the same pattern at Seathwaite only had 145·00 in.

SCOTLAND.

The Scottish returns were probably, like the English, rather more numerous and better distributed in 1874 than in 1873. The most important loss as affecting secular questions is that of Deanston House, Perthshire, at which a very careful record was kept by the late Mr. J. Finlay from 1837 to 1872; it was kept up during the years 1872 and 1873 by his gardener, but is now discontinued. As regards the equality of the geographical distribution of the stations, there are several annoying interruptions. In Eskdale, the severe frost in December burst several gauges, and so spoiled the records. In Argyllshire all Mr. McDowall's returns are missing, but we still hope that they may arrive. In this county also the Glen Etive record of E. Greaves, Esq., M.P., has been vitiated by the mistakes of his gardener. The Isle of Mull has very narrowly escaped disappearing altogether from our list: Mr. Buchan has not sent us any return from Calgary, the Lighthouse return from the Sound of Mull is imperfect, and Miss Forsyth having removed from Glengorm to Quinish, those returns are also incomplete. The Highland Railway Station at Achanault has disappeared from our list, but the rest of the agents have continued to work extremely well. We have no return from Glen Quoich, a very important station in West Inverness, and only a miserably incomplete one from the House of Tongue.

We now pass on to say a few words respecting the acquisitions. Last year we pointed out the necessity for additional stations in East

Kirkcudbright; the return we now give from Newtown Stuart goes far towards filling this vacancy. The Isle of Islay is, thanks to the British Association and to Mr. Ballingall, of Ellabus, now well provided with stations. We are indebted to Mr. H. B. Armstrong for a record kept at Strolomus, Skye, and to Mr. J. Elliot for a very useful station among the mountains of Assynt, in West Sutherlandshire.

Lastly, let us enumerate briefly the districts where new stations are most needed. (1) Central Wigton, (2) Lammermuir Hills, (3) Oban, (4) Coll, Colonsay and Jura, (5) along the Caledonian Canal. As we have never received any returns from the gauges erected for Lord Breadalbane, the enormous blank space of about 2,500 square miles which we mentioned last year still remains so; (6) W. Forfar; (7) N.W. Aberdeen; (8) Central Ross; (9) Central Sutherland; (10) Central Caithness. Surely some of our readers have shooting boxes, or other places in these districts, and will arrange to help us.

IRELAND.

The only important loss in this country has been the temporary and partial interruption of the valuable old-established station of Killaloe. The gains, on the other hand, are important, for they include Killarney and Dromore (on the Kenmare river), in Kerry; Cappoquin, Waterford; Abbeyleix, Queen's Co.; Clonbrock, Galway; Enniscoe, Mayo, and several stations in the extreme N. Even with all these additions Ireland was still very far behind, and this was brought before the British Association, at their Belfast meeting, especially in relation to the great question of the drainage of the Shannon. The result was that a grant of £20 was made for the supply of additional instruments if Mr. Symons could obtain observers. It is not necessary to relate here the heavy work which followed, it will be sufficient to state in general terms that the result finally obtained is the extremely gratifying one that Ireland is now provided with nearly—if not quite—twice the number of stations which were at work in 1874. When next year we give a map of the country to show the positions of the stations—of which we hope to quote the perfect returns—our readers will acknowledge that with perhaps the exception of W. Cork, and Roscommon, the stations and their distribution are all that is necessary for Ireland unless its population and industries largely increase. We should be sorry to miss this, the first opportunity, of expressing our thanks and that of all interested in the work, to Mr. Eason (of Messrs. W. H. Smith and Son) of Dublin, for the great assistance which he rendered at a time when our hands were more than full.

OBITUARY.

In all things there is an average, and in this part of our work that average is very steady—the number of observers whose loss we have to regret scarcely varies from year to year. The influence of these losses on rainfall work, both as regards questions of secular variation and the geographical completeness of the system, has already been stated in the previous article on Changes in the Staff of Observers. Their influence on rainfall finances is referred to subsequently, and here, therefore, it only remains to pay the last tribute of respect to several good observers, some of them, like the Venerable Archdeacon Hony, quite patriarchs in rainfall work.

Blackburn, J. W., Esq., C.E., Burleydam, Whitchurch... C 1873 imp.—C
Boucher, B., Esq., Wiveliscombe, Somerset ..... C 1864—1874 imp. C
Burgess, T., Esq., London Road, Leicester..... C 1835—1839 T
Burgess, T., Esq., Wigston Grange, Leicester ..... C 1840—1843 imp. T; C 1845 imp.—1873 T
Burton, J., Esq., Charlbury, Oxon..... 1873 T
Drummond, Gen., The Boyce Court, Dymock ..... C 1864—1873 T
Fletcher J., Esq., Kelton House, Dumfries ..... C 1870—1873 T
Glanvill, Miss, Catchfrench, Cornwall ..... 1862, 1867—1869 T
Harris, R., Esq., Knighton House, Leicester .... 1872—1873 T
Hayward, J. C., Esq., Quedgeley, Gloucester .... C 1849—1873 C
Hodgson E., Esq., Twyford, Athlone..... C 1869 imp.—1873 C
Hony, the Venble. Archdeacon, Baverstock, Salisbury ... C 1829—1869 T
Horner, Rev. J. Mells, Frome..... .. C 1852—1862 T C 1865—1873 C
Howman, Rev. E. J., Bexwell, Norfolk..... C 1864—1874 imp. T
Knott, J., Esq., Ilminster ..... C 1868 imp.—1874 imp. T
Lakin, W., Esq. Little Driffield, York, E.R. ..... C 1868—1871 imp. T
Lakin, W., Esq. Beverley, York, E.R. ..... C 1871 imp.—1874 imp. T
Lighton, Rev. Sir C. R., Bt., Ellastone, Ashbourne..... C 1863—1874 T
Palmer, R., Esq., Long Sutton, Somerset ..... C 1856 imp.—1871 imp. C
Rumney, W., Esq., Watermillock, Ullswater ..... 1860—1873 T
Stephens, A., Esq., Bridport ..... C 1855—1874 C
Westwood, Mr. J., Dollar, Clackmannan ...C 1836 imp. 1858 imp., C 1862-73 imp,
Wilson, J. J., Esq., Underfell, Kendal... ..... C 1867—1873 C
Windeatt, T., Esq., West Street, Tavistock ..... C 1824—1873 T

RAINFALL AND METEOROLOGY

OF

1874.

ON THE METEOROLOGY OF 1874,

WITH NOTES OF SOME OF THE PRINCIPAL PHENOMENA.

[These Notes should be read in conjunction with those on Heavy Rains in 1874, on page 125.]

JANUARY.

1st.—Gale at *Diss*, IV. from S.W., commencing at midnight.—*Strathconan*, XVIII. Very heavy rain, all surrounding country flooded.

2nd.—*Dartmoor*, V. Very mild, thorns budding and primroses appearing.—*Ballinasloe*, XXII. Very squally.

3rd.—*Swallowfield, Horsham*, II. Thunder in the night.—*Diss.* Gale from S.W. in afternoon.—*Coston*, VI. Very high wind at sunset.—*Llanfrechfa*, XI. Stormy from S.W. all day.

4th.—Slight fall of snow over parts of Middlesex, Sussex, Bedford, Norfolk, Leicester and Cheshire.

7th.—*Ballinasloe.* High wind.

8th.—*Dartmoor.* Gale in the night so severe that it snapped in two a tomb-stone (of Portland stone), no flaw to be discovered; the fall of rain too, on this day, was excessive, 2·35 at the reservoir, 3·50 in the prison garden, and 3·07 on the lawn.—*Druid, Ashburton*, V. Torrents of rain all day to 8 a.m. on 9th, it fell, commencing as snow, continuously for 36 hours, from 8 p.m. on 7th to 8 p.m. on 9th, or first 24 hours 2·63 in. fell; ·97 was registered on 7th, 2·71 on 8th, and ·12 on 9th; total 3·80.—*Woodlands*, X. Raining all day, and intensely dark; total fall 1·65 in.

10th.—*Strathconan.* Stormy wind.

11th.—*Addiscombe*, II. and *Bromley*, II. Dense fog all day.—*Stanley Vic.*, IX. Winter wheat never known to look better, the roads quite dry.

16th.—*Winchmore Hill*, I. Aurora.—*Llanfrechfa.* Windy.

17th.—A little snow in Middlesex and Norfolk.

18th.—*Sandy*, III. Lightning without thunder.—*Diss.* Slight rain all day, and half a gale from south.—*Melrose*, XII. Severe gale from S.W.—*Ballinasloe.* Lightning in evening.

19th.—*Tomintoul*, XVII. High wind.—*Waterford Gas Works*, XXI. Thunderstorm and tremendous gale.

21st.—*Stanley Vic.* Found a sparrow's nest with four eggs.

22nd.—*Winchmore Hill*, *Addiscombe*, and *Oscott*, VI. Dense fog.

24th.—*Strathconan.* Wind very high.—*Budgate*, *Cawdor*, XVIII. Very rough.

27th.—*Stanley Vic.* Rooks building.—Very fine white rain or fog bow seen from near *Kilmory Lochgilphead*, XV.

28th.—*Stanley Vic.* Larks singing.

31st.—*Addiscombe.* Three plants of wild primroses with 16 fully opened blossoms.

FEBRUARY.

1st.—*Addiscombe*, II. Fog.—*Partney*, VII. Country remarkably dry and clean.

3rd.—*Addiscombe.* The following flowers in blossom, in cottage gardens in this neighbourhood—yellow crocus, snowdrop, wallflower, double stock, pansy and polyanthus.

4th.—A very fine Aurora, of which an engraving and several accounts were given in the *Meteorological Magazine*; it was observed generally throughout the kingdom, except in the south western counties of England; the only facts required to supplement the accounts above referred to are, that the arch was distinctly seen at *Partney*, VII., and that at *Melrose*, XII. it was seen as early as 6.20 p.m. and is described as of a "brilliant white" colour.

5th and 6th.—Dense fog in Middlesex and the northern portions of Kent and Surrey. The following account is typical of several others:—*Winchmore Hill*, I. February 5th and 6th dense fog, that of the 6th froze on the trees to such an extent that the hoar frost was ¾ of an inch thick, and when the wind rose a little and shook it off, it covered the ground under the trees to the depth of an inch, some of which, notwithstanding the sun in the afternoon, remained till 5 p.m.; the gauge yielded ·03, the largest amount I have ever registered from hoar frost or dew.

7th.—*Hagley Rec.*, VI. Remarkable hoar frost, boys snow balling with the rime from the trees.

8th.—Slight falls of hail and snow in the Midland Counties.

9th to 12th.—Frost prevalent, with slight snow and easterly wind.

13th.—*Strathconan*, XVIII. Lightning at night.

14th.—*Druid*, *Ashburton*, V. Strong wind.—*Oscott*, VI. Gale from south.

16th.—*Strathconan*. Aurora, snow on the hills.

24th.—*Andover*, II. Rough wintry night.—*Falmouth*. S.E. gale.—*Woodlands*, X. Very gloomy, with S.E. wind.—*Solva*, XI. Gale from south.—*Strathconan*. High wind.

25th.—*Sprowston*, IV. Frosty, cold, and windy.—*Partney*. High wind.—*Llanfrechfa*. Very stormy.—*Holehouse*, XIV. Wet and very stormy.

26th.—All the returns concur in reporting heavy driving rain and high wind, but the amounts collected were not exceptionally large.

28th. Sulphur butterfly seen at *Swallowfield*, *Horsham*, II.

MARCH.

4th.—*Mulben*, XVII. High wind.

5th.—*Stanley Vic.*, IX. Swallows arrived a fortnight earlier than usual.

6th.—Very high barometer, 30·84 in., at *Saul Lodge*, VI., and 30·843 at 9 a.m. at *Hestholme*, *Bedale*, IX.

7th.—*Tavistock*, V. Dense fog.—*Druid*, V. Bright aurora, seen also at *Woodlands*, X.

9th.—Thunderstorm at *Trevarrick*, V. at night, and lightning seen in the W. from *Halifax*, IX.

9th to 11th.—Snow fell generally, but it did not remain long unmelted.

10th.—*Oscott*, VI. Flash of lightning in W. at 9 p.m.

11th.—Sharp frost in the early morning hours; min. in air at *Audley End*, IV., 6°; grass min. at *Leicester*, VII., 6°·5; and —5°·0 at *Hestholme*.

13th to 15th.—*Druid*. Distant objects very clear.

16th.—*Stanley Vic.* Vegetation making rapid progress, gale in night.

17th.—Strong wind, especially in Scotland; reporter at *Tain*, XVIII., writes, "very strong wind, which continued, more or less, during the rest of the month."

18th.—Very stormy in North of Scotland.

19th.—*Tavistock*. Dense fog.—*Melrose*, XII. Severe gale from W.—*Forres*, XVII. Very stormy.

22nd.—Westerly gale at *Melrose*.

23rd.—Fine warm day over most of England.

27th.—*Dalnaspidal*, XVI. Rain and high wind.

28th.—*Forest Hill*, II. Black bulb vacuum ther. in sun, 110°.—*Sandy*, III. High S.W. wind.—*Tavistock*. High wind.—*Mulben*, XVII. High wind with sleet.—*Budgate*, XVIII. Windy.

29th.—*Forest Hill*. Squally, with S.W. gale.—*Sandy*. Strong S.W. wind.—*Sprowston*, IV. High wind both day and night.—*Druid*. Very stormy night. — *Woodlands*. The 28th and 29th were decidedly the most stormy days of the month; on the 28th ·47 of rain fell in the day and 1·76 in the night, making 2·23; the tarns here were more increased, and the lands flooded than has been seen since the thunderstorm of the 22nd of July, 1873.

30th and 31st.—High westerly wind, with hail, at many stations in Scotland.—Much lightning at *Nairn*, XVII. on night of 31st.

APRIL.

1st to 4th.—*Melrose*, XII. Stormy, with hail and snow.—*Holehouse*, XIV. Cold and damp.—*Glengorm*, XV. Stormy.—*Innerhadden*, XVI. Stormy, with snow and sleet, though the wind was W.—*Budgate*, XVIII. Stormy, with snow.

2nd.—*Sprowston*, IV. and *Oscott*, VI. Gale, continuing the whole night of 3rd.—*Druid*, V. Heavy storm all day.—*Coston*, VII. High wind.—*Castle Malgwyn*, XI. Stormy.—*Cambuslang*, XIV. Thunderstorm.

3rd.—*Winchmore Hill*, I. Lightning in evening.—*Addiscombe*, II. Hail from 2·20 to 2·27 p.m. hailstones about the size of peas; thunder heard at 4.40, and lightning observed twice in S.W. followed immediately by a heavy shower, which lasted about 15 minutes; thunder again heard (nearer) at 4.48, at 4.50, and faintly at 4.52 p.m.; another shower at 7.10, for about 15 minutes, followed by a driving rain at 8.30, wind W.; bar. rose ·023 during the seven minutes which the short hail shower lasted; temp. just before the hail fell, dry 49°·0, wet 43°·6, directly after it had ceased they had fallen to 41°·5 and 39°·5, thus showing a fall of 7°·5 in the dry bulb, and 4°·1 in the wet.—*Bromley*, II. Gale, thunder and hail.—*Orcheston, St. Mary*, V. Slight thunderstorm.—*Druid*. Hail.—*Court Barn*, V. Thunder and very vivid lightning nearly all the afternoon.—*Bincombe House*, V. Thunderstorm, with hail two to three inches deep. — *Flookburgh*, VIII. Thunderstorm, with rain and high wind from 1 to 4 a.m.—*Nairn*, XVII. Snow showers.

4th.—*Calcethorpe,* VII. Hail.—*Mansfield,* VII. Thunderstorm at 4 p.m.—*Halifax,* IX. Rain and snow.

5th.—*Winchmore Hill.* Aurora.—*Bromley.* Hail.

6th.—*Harrow,* I. Wryneck arrived.—*Addiscombe.* First white butterfly seen.

7th.—*Oscott.* Fine solar halo 3 p.m.—*Strathconan,* XVIII. Lightning at night.

10th.—*Druid.* Hail.—*Burnley,* VIII. Wryneck appeared.—*Budgate.* Hail.—*Glenam,* XX. Heavy hail, destroying wall fruit.

11th.—*Melrose.* Thunderstorm at 4.40 p.m.

12th.—*Calcethorpe.* Thunder.—*Broughton-in-Furness,* VIII. Coniston "old man," covered with snow.—*Halifax.* Snow and rain.—*Strathconan.* Frost.

13th.—*Addiscombe.* Hail shower at 1.30 p.m.—*Bromley.* Hail storms and high wind.—*Coston,* VII. Thunder from 2.30 to 3.30 p.m. —*Calcethorpe.* Thunder.—*Woodlands.* A most remarkable day for April, the ther. not rising above 34° until night; the snow lying on the ground all day, but on the following day the ther. rose to 58°, and the snow went.

14th.—*Partney,* VII. Strong gale in the evening.—*Innerhadden.* Heavy gale from W. and N.W.

15th.—*Calcethorpe.* No rain during the rest of the month.

17th.—*Addiscombe.* Common poplar in leaf.—*Swallowfield,* II. Cuckoo first heard.

18th.—*Bromley.* Heard the nightingale.—*Melrose.* Distant thunder.

19th.—*Burnley.* Cuckoo first heard.—*Melrose.* Thunderstorm at 9.30 p.m.

20th.—*Harrow,* I. Martins arrived.—*Bromley.* Cuckoo heard.

21st.—*Harrow.* Heard nightingale.—*Addiscombe.* Very fine and dry; at 2.30 p.m. dry bulb 76°·1, wet bulb 60°, humidity only 38.—*Forest Hill,* II. At 1.40 p.m. dry bulb 76°.5 andwet 60°·2; humidity, 37, the driest I have ever observed.—*Bromley.* Martins seen.—*Swallowfield.* Swallows arrived.—*Zeal Monachorum.* Saw two swallows.

22nd.—*Winchmore Hill.* Heavy thunder clouds in E. and S.E., from 5 to 7 p.m., apparently a thunderstorm at a considerable distance, moving from S.W.

23rd.—*Harrow.* Oak in leaf.—*Keith,* XVII. Slight frost and cold till noon, then warm for the season; vegetation very far advanced.

24th.—*Harrow.* Cuckoo heard.—*Bromley.* Swallows seen.—*Hagley,* VI. Cuckoo first heard.

25th.—*Bromley.* Fog.—*Dava.* Thunderstorm.

26th.—*Addiscombe* and *Sansaw*, VI. Cuckoo first heard.—*Nairn*, XVII. Thunder in afternoon.—*Strathconan.* Very hot on the hill tops, but low ground enveloped in mist.—*Budgate.* Thunderstorm.

27th.—*Forres*, XVII. Thunder.

27th to 30th—Sharp frosts at night, blackening potatoes and injuring fruit.

MAY.

1st.—*Melrose*, XII. Landrail arrived.—*Diss*, IV. Shower of hail and rain the first down-pour since April 18th.—*Dartmoor*, V. Cuckoo first heard.—*Calcethorpe*, VII. min. 30°·1 in air and 24°·2 on grass.—

2nd.—*Dalnaspidal*, XVI. Snow and sleet.

3rd.—*Winchmore Hill*, I. Hail and distant thunder.—*Bromley*, II. Fog.—*Sandy*, III. Hail.—*Druid*, V. Thundershower in afternoon.—*Melrose.* Snow.—*Strathconan*, XVIII. Snow on hills (which remained until 10th).

5th.—*Druid.* Hail and rain 4 to 6 p.m.

6th.—*Melrose.* Cuckoo arrived.

7th.—*Sandy.* Thunder.—*Broughton*, VIII. Thunder, hail, and snow.—*Melrose.* Thunderstorm with hail at 2.50 p.m.

8th.—*Winchmore Hill.* Lightning at night.—*Forest Hill*, II. Frequent showers and thunderstorms at 1.53 p.m., but not severe.—*Bromley.* Thunder.—*Addington*, III. Thunder.—*Oxford*, III. Hail.—*Sandy.* Thunder.—*Compton Bassett*, V. Thundershower.—*Ashby-de-la-Zouch*, VII. Slight snow.—*Coston*, VII. Hail.—*Mansfield*, VII. Hail.—*Melrose.* Thunderstorm at 3 p.m.—*Ballinasloe*, XXII. Sharp frost at night.

9th.—*Winchmore Hill.* Lightning at night.—*Sandy.* Hail.—*Shaftesbury.* Violent thunderstorm with snow. No other thunderstorm during 1874.

10th.—*Bromley.* Sharp frost.

11th.—*Bromley.* Hail and very cold.

12th.—*Stanley Vic.*, IX. Rain greatly needed.—*Melrose.* Thunder at 3 p.m.

13th.—*Dalnaspidal.* Snow.

15th—*Winchmore Hill.* Hail.—*Strathconan.* Frost.

17th.—*Oscott.* Solar halo at 2.30 p.m.—*Partney*, VII. Potatoes generally cut down by frost; several parhelia.—*Calcethorpe.* Min. in air 31°·2 on grass 24°·7.

18th.—Sharp frost in many parts, min. on grass at *Winchmore Hill* 18° and at *Calcethorpe* 22°·1, at *Beverley* the min. in the air was 29°·0 and much apple blossom was destroyed; *Strathconan.* Weather very warm and dry.

22nd.—*Winchmore Hill.* Thunderstorm.—*Muswell Hill,* I. Thunderstorm.—*Bromley.* Thunder.—*Forest Hill.* Thunder and lightning.

23rd.—*Stanley Vic.* Rain, which is very valuable.—*Cessnock Park,* XIV. Thunder.

24th. *Addington,* III. Slight thunderstorm.—*Sandy,* III. Lightning.—*Ipswich,* IV. Thunder.—*Druid.* Thunder 4 p.m.

25th.—*Winchmore Hill.* Thunderstorm.—*Pinner Hill,* I. Thunderstorm, and max. temp. of month.—*Bromley.* Violent thunderstorm followed by thick fog.—*Forest Hill.* Distant thunder.—*Sandy.* Thunder.—*Compton Bassett.* Distant thunder.—*Stanton Long Vic.,* VI. Heavy thunderstorm began at 6.30 p.m., very bad for an hour, rained till 9.30, very black clouds, wind N., rainfall, 1·95.—*Coventry,* VI. Violent thunderstorm and max. rain of the year (1·50 in.) began at 3.45 p.m.—*Oscott.* Thunderstorm in afternoon with heavy rain.—*Ashby-de-la-Zouch.* We were not much affected by the thunderstorm of the 25th, it began to rain gently about 5 p.m., it rained faster 6 to 6.30, but the total fall was only 0.10 in.—*Coston,* VII. Distant thunder in afternoon.—*Stanley.* Vegetation progressing rapidly.

26th.—*Druid.* Thunder in afternoon.

28th.—*Sansaw.* Distant thunder.

29th.—*Melrose.* Thunder at 4.30 p.m.

31st.—*Druid Ashburton.* Very clear; at 1 p.m. the sea very visible from a point whence it is not usually seen; Portland Bill seen clearly, though 60 miles distant.—*Melrose.* Gale from S.W.

JUNE.

1st.—*Diss,* IV. With the exception of a slight shower which gave 0·02 in. on the 23rd of May, the rain that fell this day (0·03) is the first since the 15th of May.—*Melrose,* XII. and *Mulben,* XVII. High wind from S.W.

2nd—*Sprowston,* IV. Slight thunderstorm at 5 a.m.—*Hillington,* IV. Much thunder.—*Coston,* VII. 0·17 of rain fell here, but at Saxby three miles to the W., it was very heavy, and at Melton, seven miles to the W., no rain fell.—*Ballinasloe,* XXII. Thunder at 3 p.m.

3rd.—*Middlesborough,* IX. Thunderstorm, and 0·23 in. of rain in one hour.

5th.—*Forest Hill*, II. At 2 p.m. dry 81°·0; wet 61°·3; humidity 32.

6th.—*Hanworth*, I. Max. rainfall of month (0·98 in.) from this date to June 23rd, there was only one day's rain.—*Harrow*, I. Heavy rain 1·22 in.—*Winchmore Hill*, I. Distant thunder.—*Addiscombe*, II. Thunder.—*Riverhead, Sevenoaks*, II. A very remarkable thunderstorm and fall of rain occurred here, fully 1½ inches of rain fell in the 1½ hours, from 2 p.m. to 3.30 p.m.; judging, however, from appearances and results, the fall was even heavier about one mile due E. from Riverhead, while a few miles N. of this, scarcely any rain fell.—*Riverhill*, II. Much damage done by the violent rain.—*Bromley*, II. Thunder.—*Lynnwood*, II. Thunderstorm and 1·63 in. of rain in 2½ hours.

8th.—*Diss.* First hay carried.

9th.—*Melrose.* Windy.—*Mulben.* Stormy.—*Strathconan*, XVIII. High wind.

10th.—*Melrose.* Windy.—*Mulben.* Stormy with hail.—*Strathconan.* High W. wind.

11th to 14th.—Sharp white frost in almost all parts of the country, the grass minimum was generally between 28° and 23°; potatoes are reported as injured in Bucks, Norfolk, Wilts, and Ayrshire.

15th.—*Coston.* Very high wind at night.

16th.—*Woodlands, Elterwater*, X. Almost a hurricane from the N.E. though the sky was cloudless nearly all day.

17th.—*Druid Ashburton*, V. First rain in the month 0·10.—*Holne*, V. 0·08 of rain fell, the first entry from the beginning of the month and the only one till the 23rd; after which rain fell every day but the 31st, total fall of the month 3·10 in. on nine days.—*Holehouse*, XIV. Crops suffering from want of rain.

18th.—*Sansaw*, VI. Thunder all round, distant from four to seven miles.

21st.—*Sprowston*, IV. Sharp frost, doing great damage to potatoes and garden produce, also at *Hillington.*

22nd.—*Winchmore Hill.* Thunderstorm.—*Addington*, III. Thunder.—*Sprowston.* Fine till 3.30, then thunderstorm for half-an-hour.—*Diss.* Sharp thunderstorm, in N.E., in evening.—*Coston.* Thunder all the afternoon.—*Calcethorpe*, VII. Thunderstorm and heavy rain 2 p.m.

23rd.—*Oxford*, III. Thunder.—*Diss.* Lightning at night.—*Druid.* With the exception of 0·10 in. on 17th, the rain on this day was the first during the month.—*Falmouth*, V. Up to this date very dry weather, grass, &c., suffered much, as no rain fell till the 23rd; similar

remarks are made by the observers at *Trevarrick*, V., *Taunton*, V., and *Trevalyn* XI.—*Ballinasloe*, XXII. Thunder from 2.30 to 6.30 p.m.

24th.—*Winchmore Hill.* A very heavy and protracted thunderstorm, lasting from 10 a.m. to 2 p.m., at 10.30 pieces of ice, nearly an inch long fell, but this, fortunately, lasted only about one minute.—*Addiscombe.* Distant thunder at 10.30 a.m., at 0.35 p.m., and at intervals of about a minute till 1.36 p.m., louder at 1.47 p.m., frequent showers.—*Addington.* Thunder.—*Diss.* Two sharp thunderstorms in forenoon.—*Sprowston.* Thunder all day.—*Cheadle*, VI. Hail from N.W. at 2 p.m.—*Coston.* Hail and thunder at 9.15 a.m. thunderstorm, heavy hail 4 p.m.—*Chesterfield*, VII. Church struck at noon.—*Broughton*, VIII. Thunder.—*Halifax*, IX. Thunder.—*Middlesborough.* Thunderstorm.—*Woodlands.* Hail and distant thunder.—*Holehouse*, XIV. Distant thunder.—*Glasgow*, XIV. Thunderstorm.—*Forres*, XVII. Thunderstorm with heavy rain.—*Nairn.* XVII. Thunderstorm in afternoon, with 0·50 in. rain in less than half-an-hour.—*Budgate, Cawdor*, XVIII. Severe thunderstorm with hail and snow, total fall 1·60, all of which fell in less than one hour.—*Strathconan.* Thunderstorm.

25th.—*Addiscombe.* Thunderstorm from 1.15 to 1.25 p.m., heavy shower at 1.42 followed by very heavy hail at 1.43, storm ceased at 1.50 p.m.—*Diss.* Sharp thunderstorm severe in N.—*Sprowston.* Much thunder.—*Calcethorpe.* Thunderstorm from 2.44 to 2.49 p.m., 0·17 fell, winds S.W. strong; five sheep killed in a neighbour's field.—*Coston.*—Thunder.—*Woodlands.* Distant thunder.—*Glasgow.* Thunder—*Strathconan.* Thunderstorm.

26th.—*Stanley.* Distant thunder.—*Middlesborough.* Thunderstorm.—*Woodlands.* Thunder.—*N. Balfern*, XII. Heavy rain, 0·55 fell in about half-an-hour.—*Nairn.* Distant thunder in afternoon.

27th.—*Winchmore Hill.* Foggy.—*Beaminster*, V. Thunderstorm with rain 8 p.m. to midnight—*Druid.* Thunder at 6 p.m.—*Nairn.* Distant thunder in afternoon.

28th.—*Tytherton.* Heavy thunderstorm with hail and rain.—*Compton Bassett*, V. Distant thunder.—*Druid.* Thunderstorm 1 to 2 p.m.—*Innerhadden*, XVI. Thunder.—*Aughnacloy.* 0·93 of rain fell in 40 minutes, during a most remarkable storm of thunder and hail, average size of hailstones 2 in. in circumference; the storm was a mile in width, and came from due N. to S., but it seemed to have bent round Omagh.

29th.—*Glasgow.* Thunder.—*Innerhadden.* Thunder.—*Mulben.*

Thunderstorm.—*Nairn.* Thunder about noon.—*Strathconan.* A great thunderstorm.—*Budgate.* Thunder.

30th.—*Winchmore Hill.* Foggy.—*Easedale,* X. Heavy rain, the first in the month.—*Holehouse.* Heavy rain in afternoon.

JULY.

1st.—*Addington,* III. Very dry and hot.

2nd.—*Strathconan,* XVIII. Thunder.

3rd.—*Melrose,* XII., S.W. gale for 12 hours.—*Glasgow,* XIV. Thunderstorm.—*Innerhadden.* Windy.

4th.—*Glasgow.* Thunderstorm and squally.

6th.—*Andover,* II. Thunder.—*Nairn,* XVII. Hazy to eastward.

9th.—Hottest day in the year at several stations, the temperature in shade reached 90°·8 at *Winchmore Hill,* I. (with lightning in evening), 89°·2 at *Forest Hill,* II., 92°·6 at *Foxgrove, Beckenham,* II., 91°·8 at *Chapel Hill, Basingstoke,* II., and 88° at *Derringham,* IX. Distant thunderstorms observed from *Forest Hill, Strathfield Turgiss,* II., and *Diss,* IV., in the evening.

10th.—*Winchmore Hill.* Max. temp. 90°·3, incessant thunder from 6 to 10.30 p.m.—*Pinner Hill,* I. Thunderstorm.—*Addiscombe,* II. Frequent lightning from 8.45 p.m. to 9.35 in S.W., it continued at intervals of one to five minutes till 10.30; rain began falling at 11.40 p.m., with occasional flashes of lightning, but with no thunder until about 11.45, then flashes of vivid lightning with distant and long continued thunder, duration of thunder claps 50 seconds (five or six lasted as long as this); at 12.50 a.m. time interval 10 or 12 seconds, rain falling more heavily; at 1.5, time interval 15 seconds, flashes occurring at long intervals; rain fell till 1.30 a.m.; amount of fall 0·14. —*Bromley.* Thunder.—*Forest Hill.* Distant thunderstorm.—*Strathfield Turgiss.* Thunderstorm, with heavy rain at 3 p.m.—*Broughton,* III. The only heavy rain of the year was on the 10th of July, 1·40 in about 1 hour and 20 minutes; bright in the morning and day close, first thunder in S.E. at 3.55 p.m., in S. at 5.30; rain began very suddenly and fell heavily at 7.40 p.m., first lightning seen at 7.50, near and very bright; from 8.20 to 8.30 the rain ceased and at this time the thunder and lightning were at the worst; at 8.26 there was one remarkable flash, instantly followed by a sharp peal of thunder; last lightning seen at 9 p.m. At Bloxham, 1½ miles S.E., the rain was said to be heavier than here; a boy was rendered insensible by the lightning; at Tadmarton 2 miles S.W. there was no rain, and

at North Newington 1½ N.W. very little; in a field a little to the N. an oak was split all the way down.—*Oaklands, Aspley Guise,* III. About 1·25 in. fell between 7.30 and 8.30 p.m.—*Sheering,* IV. Thunderstorm, and 0·54 in. of rain fell in less than 35 minutes. — *Diss.* Distant thunder.—*Brereton,* VI. Thunderstorm at 9 p.m.

11th.—*Winchmore Hill.* Thunderstorm 2.30 to 7 p.m.—*Addiscombe.* Distant thunder.—*Tunbridge,* II. One of the most violent thunderstorms ever remembered burst over here, doing much damage; the rain was very heavy, 3.00 in. falling between 2.30 and 4.30 p.m.—*Falconhurst,* II. Thunderstorm.—*Riverhill,* II. Very heavy rain, 1·50 in. fell in one hour.—*Lynwood,* II. A very partial thunderstorm, 1·00 in. falling in half-an-hour, between 4 and 4.30; at Ascot, only 2 miles distant, the roads were dry and dusty.—*Mansfield,* VII. 0·71 fell between 10 and 11 a.m.

13th.—*Melrose.* Thunder.

14th.—*Tain,* XVIII. Heavy rain, 1.37 in. fell chiefly between noon and 3 p.m.

18th.—*Cheadle,* VI. At 5.15 p.m. dry bulb 75°, wet 58°, difference 17°, humidity 36; the difference was greater at 3 p.m., it was about 20°, but the particulars were not recorded.

19th.—Very hot.—*Winchmore Hill.* Max. 92°·6.—*Surbiton,* II. Max. 93°·8.—*Forest Hill.* 91°·6.—*Bromley.* Fog.—*Burton-on-Trent,* VI. Max. of the year 87°.—*Mansfield,* VII. Max. 89°·5.—*Holehouse,* XIV. Thunderstorm.—*Glasgow.* Thunder.—*Pitlochrie,* XVI. Thunderstorm.—*Forres,* XVII. Thunder.

20th.—*Forest Hill.* Max. temp. of the year 92°·3.—*Audley End,* IV. Max. of the year 89°·0.—*Sprowston,* IV. Thunderstorm in the afternoon.—*Tytherton,* V. Max. temp. of the year 85°·5.—*Calcethorpe,* VII. Thunderstorm at 3.45 p.m.—*Broughton,* VIII. Thunder.—*Melrose.* Thunderstorm.

21st.—*Diss.* Distant thunder in N. and N.E.—*Sprowston.* Thunderstorm 2.29 to 2.44 p.m., and 0·28 in. of rain.—*Hillington.* IV. Thunderstorm; Roydon Church struck.—*Coston,* VII. Thunderstorm at 0.30 p.m. and again at 5.30 p.m.—*Melrose.* Thunderstorm. *Cambuslang,* XIV. Thunder.—*Glasgow.* Thunder.

22nd.—*Plas Machynlleth,* XI. Very heavy rain at night.—*Tubrid Cahir.* ·70 in. of rain in 30 minutes.—*Dublin,* XXI. A succession of thunderstorms with heavy rain.

23rd.—*Pinner Hill.* Thunderstorm.—*Bromley.* Thunder.—*Diss.* Distant thunder.—*Brereton.* Thunder.—*Calcethorpe.* Two thunder-

storms, one at 1.45 p.m. and one at 4 p.m.—*Walton-on-the-Hill*, VIII. Thunderstorm, 2 a.m. to 7.30 a.m., with 1·70 of rain.

24th.—*Addiscombe.* Thunder.—*Strathfield Turgiss.* Thunder.—*Addington.* Thunder.—*Diss.* Sharp thunderstorm at 1.45 p.m.—*Sprowston.* Tremendous thunderstorm, 0·78 in. fell in 30 minutes, 2.0 to 2.30 p.m.—*Beaminster*, V. Thunder.—*Druid*, V. Thundershower at 2 p.m.—*Cheadle*, VI. Thunderstorm.—*Ford House, Bromsgrove*, VI. Very heavy hail storm.—*Brereton.* Thunderstorm, 3.20 to 3.30 p.m., the railway station struck by lightning.—*Coston.* Occasional thunder all day.—*Branston*, VII. Thunderstorm, ·85 fell in one hour, and in many places the ground was covered and ditches were filled with hailstones; some beasts were killed and damage was done to trees and buildings; the storm came from the W. and was very narrow, not more than two miles wide.—*Broughton.* Thunder.—*East Linton*, XIII. 2.20 in. fell betwixt 8 and 9 a.m.—*Llanfrechfa*, XI. Much thunder from 10 a.m. to noon.

25th.—*Strathfield Turgiss.* Thunder.—*Sandy*, III. Thunder and heavy rain, 0·62 in. fell in less than an hour.—*Coston.* Distant thunder all day.—*South Shore*, VIII. Wheat cut.

26th.—*Stretton Rectory*, VI. A remarkable difference between wet and dry ther.; the day was by no means so warm as many in the previous week, the max. not having reached 80°, and I had recorded ·24 of rain that morning; at 12.30 the difference was 19°, at 1.30 20°, at 2.30 21°, and at 4 p.m. 22°·5. [We regret that our observer has overlooked the fact that the importance of the above differences cannot be correctly appreciated without a statement of dry bulb temperatures; the values given above are, unquestionably, remarkable, especially for the West of England, but we cannot determine whether or not they are unprecedented.—Ed.]

27th.—*Pinner Hill.* Thunder.—*Burnham*, V. Thunderstorm, no other thunderstorm during the month worthy of special notice.—*Stanley Vic.*, IX. Harvest commenced.—*Innerhadden.* Thunderstorm.—*Forres.* Thunder.—*Nairn.* Thunder at 6 p.m.—*Strathconan.* Thunder.

28th.—*Addington.* Thunderstorm, very heavy rain in the evening two miles distant, but very little fell here.—*Diss.* Thunderstorm at noon.—*Sprowston.* Thunder.—*Cheadle.* Thunderstorm.—*Brereton.* Thunder at 2, and thunderstorm at 3.30 p.m., with hail.—*Branston.* Another violent storm, in half-an-hour the ground was 2 in. deep with hailstones, varying from ½ to 1¼ in. in diameter; harvest fortunately

not ripe, but the corn was much knocked out; fruit bruised, vegetables were cut, and glass was broken ; the hail falling off the buildings might be taken up by cart loads.—*Halifax*, IX. Terrific thunderstorm from 6.30 to 9.30 p.m.; rain very heavy (1·55 in 24 hours); flagstones were washed above each other in several places, and some houses flooded.—*Melrose.* Thunderstorm.—*Camluslang.* Thunderstorm.—*Innerhadden.* Thunderstorm.—*Nairn.* Distant thunder, 1 to 6 p.m.

29th.—*Diss.* Thunderstorm at 5 p.m., from W. to S.W.—*Sprowston.* Thunder in all directions in afternoon.—*Coston.* Near thunder at intervals all day.—*Calcethorpe*, Thunderstorm at 4.30 p.m.

30th.—*Pitlochrie.* Windy.

31st.—*Tamworth*, VI. Thunderstorm, and the heaviest rain in the year.

AUGUST.

1st.—*Nairn*, XVII. Distant thunder in evening.

5th.—*Melrose*, XII. Strong N.W. wind.

7th.—*Bromley*, II. Thunder.—*Mansfield*, VII. Thunderstorm.—*Llanfrechfa*, XI. Thunder and one flash of lightning at 8 p.m.

8th.—*Sheering*, IV. Thunderstorm with hail and rain.—*Melrose.* Thunderstorm with hail at 3 p.m.

9th.—*Bromley.* Thunder.

10th.—*Winchmore Hill*, I. Thunderstorm.—*Addiscombe*, II. Thunderstorm commencing at noon and continuing at intervals till past 6 p.m.—*Andover*, II. Slight thunderstorm.—*Diss*, IV. Severe thunderstorm in west.—*Sprowston*, IV. Several thunderstorms between noon and midnight.—*Calcethorpe*, VII. Thunderstorm at 4.30 and 6.30 p.m.—*Bolton*, VIII. Distant thunder.—*Stanley*, IX. Notwithstanding the daily showers reaping progresses very rapidly, and no harm has been done to the corn, the pastures improving greatly by the 12th.

11th.—*Tytherton*, V. Strong westerly gale.

13th —*Tunbridge*, II. High wind.—*Bolton.* Distant thunder.—*Melrose.* Heavy rain.—*Blackstock*, XVII. The rainfall began about 11 p.m. and at 9 a.m. on the 14th, shewed a fall of 2·31 in. in 10 hours ; the rain continued on 14th till 8 p.m., giving an additional fall of ·93, being 3·24 in. in 21 hours.—*Leochel Cushnie.* In 6 hours of the morning of this day 2·40 in. fell, the largest fall ever registered here.—*Clonbrin*, XXII. 1·21 in., ·72 of which fell between 1.30 and 8 p.m.—*Nairn*, XVII. Heavy rain (1·32 in.) and great flood in the river.

14th.—*Tunbridge.* High wind.

15th.—*Mansfield.* Thunderstorm.

16th.—*Partney,* VII. Heavy rain in afternoon.

20th.—*Mansfield.*—The hottest day in the month; max. 84° great variation in temperature between 20th and 21st, that is in 36 hours, one being the max. of the month 84°, the other, the min. of the month, on the following day 40°.—*Stanley.* Harvest operations carried on very rapidly, there being no rain from the 17th to the 28th; all corn cut and nearly all carried by the end of the month.—*Woodlands, Elterwater,* X. Max. in sun (black bulb in vacuo) was 142° and 81° in shade.—*Innerhadden,* XVI. Hoar frost.

24th.—White frost at *Coston* VII., and *Bucknall* VII.

25th.—*Winchmore Hill.* Thunderstorm.—*Addiscombe.* Thunderstorm in E.N.E.—*Tenterden,* II. Thunderstorm, ·47 of rain fell between 5.29 and 5.49 p.m.; I took the measure every 5 minutes, and subjoin the results:—

5·29 to 5·34	=	5	·080
5·34 to 5·39	=	5	·175
5·39 to 5·43	=	4	·185
5·43 to 5·49	=	6	·030
...	...	20	·470

At the same time, at Benenden, only ·035 fell, and within a mile of my Tenterden gauge scarcely any rain fell.—*Bromley.* Thunder.

26th.—*Diss.* Harvest finished.

27th.—*Broughton,* VIII. Thunder.

28th.—*Andover:* Slight thunderstorm, 1 p.m.—*Cambuslang* XIV. Thunderstorm.—*Glasgow* XIV. Thunderstorm with heavy rain.

29th.—*Addiscombe.* Slight thunder.—*Oxford,* III. Hail.—*Tenterden.* Thunderstorm; this storm appears to have been more general than that of the 25th, about ·080 fell in three minutes at Benenden on that day; but I was unable to take any particulars of the rapidity of the fall.—*Sheering.* Hail and distant thunder.—*Diss.* Thunderstorm.—*Sprowston.* Thunderstorm in afternoon.—*Coston.* occasional thunder.—*Calcethorpe.* Distant thunder in S.E. 4.30 p.m. —*Mansfield.* Loud thunder with hail and rain.—*Bolton.* Distant thunder.—*Llanfrechfa.* Heavy storm at 6 a.m., with thunder, lightning, and high wind.—*Glasgow.* Thunder, forked lightning and hail.

30th.—*Melrose.* Hoar frost.

31st.—*Andover.* Stormy night and high wind.—*Druid,* V. Torrents of rain after 6 p.m.—*Shap,* X. Between 9 a.m. 30th, and 9 a.m. 31st, heavy rain and great flood.—*Melrose.* In eight hours 1·10 of rain.

SEPTEMBER.

1st.—*Llanfrechfa*, XI. Stormy till 11 a.m.—*Melrose*, XII. Lightning at 10 p.m.

2nd.—*Addington*, III. Thunder.—*Mansfield*, VII. Thunderstorm at 1 p.m.—*Stanley Vic.*, IX. Thunderstorm; a large tree split by the lightning.—*Llanfrechfa.* Thunderstorm.—*Melrose.* Sheet lightning at 8.40 p.m.—*Glasgow*, XIV. Thunder at night.—*Innerhadden*, XVI. Thunder.

3rd.—*Walsham-le-Willows*, IV. Very heavy rain, 1·49 in. fell between 6 p.m. and 6 a.m. 4th.—*Diss*, IV. Heavy rain from 7 p.m.; total 1·40 in.—*Druid*, V. Heavy rain till 5.30 p.m.—*Coston*, VII. Heavy rain 5 to 10 p.m.—*Melrose.* Thunderstorm in evening.

4th.—*Calcethorpe*, VII. Thunder at 0.30 p.m.

7th.—*Stanley Vic.* Corn all carried.

8th.—*Druid.* Fine day, but torrents of rain at night.

9th.—*Addiscombe*, II. Thunder from 4.25 to 4.45 p.m., lightning at night.—*Bromley*, II. Hail.—*Addington.* Thunder and hail.—*Sprowston*, IV. High wind and heavy rain noon to 1 p.m.—*Orcheston*, V. Thunderstorm and 0·12 in. in six minutes.—*Druid.* Thunderstorm with hail.—*Langtree*, V. Short but very heavy hailstorm at 5 p.m.—*Stanley Vic.* Heavy rain in morning.—*Glasgow.* Thunder at noon.

10th.—*Harrow*, I. Thunderstorm at 2 p.m., and great fall of temperature.—*Calcethorpe.* Lightning at 9 p.m.—*Elterwater*, X. Thunderstorm in afternoon..—*Cambuslang.* Thunderstorm.

15th.—*Melrose.* Gale from S. for 24 hours.—*Glasgow.* Stormy morning.

19th.—*Melrose.* High W. wind.

21st. *Measandbecks*, X. Thunder and heavy rain.

22nd.—*Bromley.* Foggy—*Hailsham.* Thunderstorm.

23rd.—*Tenterden*, II. Heavy storm at 9 a.m.—*Strathfield Turgiss*, II. Dense fog and constant shifting of the wind.—*Ipswich*, IV. Thunder.—*Langtree.* Thunder at 3 p.m.—*Calcethorpe.* Fog at night.

24th.—*Coston.*—Thunder in N. at 2 p.m.—*Bucknall*, VII. Much thunder.—*Calcethorpe.* Thunder and lightning, with hail and rain at 1.30 p.m.—*Mansfield*, VII. Thunderstorm at noon.

27th.—*Tunbridge*, II. Thunderstorm.—*Ipswich.* Thunder.—*Langtree.* Thunder in afternoon.

29th.—*Compton Bassett*, V.—High wind.—*Elterwater.* Thunderstorm in afternoon.—*Melrose.* Distant thunder.—*Innerhadden.* Thunder.

30th.—*Addiscombe.* Lightning in S. from 9 to 9.10 p.m.; heavy rain from 10.15 to midnight, and again with thunderstorm at 1.30 a.m.—*Falconhurst.* Thunderstorm.—*Tunbridge.* Severe thunderstorm.—*Tenterden.* Thunderstorm.—*Bromley.* Thunderstorm at night.—*Hailsham,* II. Thunder.—*Sandy,* III. Heavy rain.—*Ipswich.* Thunder.—*Sprowston.* Thunder about midnight.—*Burnham,* V. Thunderstorm with heavy rain 1.36.—*Llanfrechfa.* Steady rain from 10 a.m. to 7 a.m. (1st October.)

OCTOBER.

1st.—*Addiscombe,* II. Thunderstorm from 1.45 to 3 a.m., followed by heavy rain.—*Forest Hill,* II. Sheet lightning 6.30 to 7 p.m.—*Sprowston,* IV. Thunderstorm at 1 a.m.—*Glasgow,* XIV. Windy.—*Innerhadden,* XVI. Strong W. gale.—*Budgate,* XVIII. Windy.

2nd.—*Sprowston.* High wind.—*Calcethorpe,* VII. Lightning at 9 p.m.—*Llanfrechfa,* XI. Windy.—*Castle Malgwyn,* XI. Stormy.—*Melrose,* XII. S.W. gale.—*Glasgow.* Windy.—*Innerhadden.* Strong W. gale.—*Dalnaspidal,* XVI. Severe gale, with heavy rain (1.70 in.)—*Dava,* XVIII. Very stormy, with heavy rain (1·05 in.)

3rd—*Sprowston.* High wind.—*Innerhadden.* Strong W gale.

4th.—Fine aurora, between 9 and 11 p.m., seen throughout the East and centre of England and Scotland; the observer at *Melrose* described it as, "rolling onwards like the waves of the sea."

5th.—*Elterwater.* Very wet at night.

6th.—*Sprowston.* Gale at night.—*Coston,* VII. High wind till midnight and heavy rain when the wind dropped.—*Caton,* VIII. Max. rain of year 2·01 in.—*Allithwaite,* VIII. Upwards of 3·00 fell between midnight October 5th and midnight October 6th, and on the 7th the waters were higher than I had ever seen them since residing here (18 years).—*Flookburgh,* VIII. Lands flooded, railway traffic suspended.—*Shap,* X. High winds and great fall of rain this day (3·70), and as 1·05 fell yesterday, there are great floods, much land is under water and some roads are flooded.

7th.—*Bromley,* II. Gale at night.—*Arle Bury,* II. Between 9 and 9.30 a.m. 0·30 in. of rain fell.—*Addington,* III. Very heavy rain at 7 a.m.—*Calcethorpe.* Thunder at 2.30 p.m.—*Llanfrechfa.* Very heavy rain last night, total 1·87 in.

11th.—*Stanley.* Swallows left.

13th.—*Mansfield,* VII. Very dense fog in afternoon.

15th.—*Addiscombe.* Distant thunder in N.E. from 5.30 to 6 p.m.,

vivid lightning till about 7, most frequent in E. and dying away in S. —*Tunbridge*, II. Thunderstorm in evening—*Hailsham*, II. Heavy thunderstorm.—*Forest Lodge*, II. Heavy thunderstorm and 1·10 of rain, which about 6 p.m. was violent.

20th.—*Oxford*, III. High wind.—*Sprowston.* Gale in evening.—*Coston.* Very high wind all night.—*Mansfield.* Extremely stormy all night.—*Stanley.* Heavy gale from S.W.—*Llanfrechfa.* Heavy gale of wind came on at midnight which did much damage to the shipping.—*Dalnaspidal.* Terrific gale and heavy rain, 2·22.—*Strathconan*, XVIII. 1·37 of rain, country flooded.

21st.—*Tunbridge.* Very rough S.W. gale in morning.—*Forest Hill.* Heavy W.S.W. gale till 2 p.m.—*Swallowfield*, II. Swallows left.—*Sprowston.* Heavy gale all day W.S.W. to W.—*Coston.* Very high wind, trees blown down, stacks overturned, &c.—*Tytherton*, V. Strong W.S.W. gale.—*Bishop's Castle*, VI. Severe gale.—*Allithwaite.* Violent gale blowing down trees, telegraphs, &c.—*Woodlands.* Very wet with hurricane, hail and rain all day.—*Shap.* Very stormy and much hail. —*Melrose.* Severe W. gale for 12 hours.—*Holehouse.* Extremely stormy.—*Innerhadden.* Heavy gale from W. and S.W.—*Keith*, XVII. Hurricane from 8.30 to 10.30 a.m.—*Forres*, XVII. Very stormy.—*Dingwall*, XVIII. Terrific day throughout.—*Fermoy*, XX. Great wind.

22nd.—*Middlesborough*, IX. Heavy gale doing much damage.

23rd.—*Bromley.* First frost in air.

24th.—*Stanley Vic.* Large flight of ducks crossing at 4.30 p.m.—*Shap.* Heavy rain (2·00 in.)—*Glasgow.* Squally.

26th.—Fog in the South of Scotland.

27th.—*Diss.* Swallows still here, unusually late.

31st.—*Dartmoor*, V. Loud and prolonged thunder in E.—*Druid*, V. Thunderstorm at 8 p.m., with heavy rain.—*Holne*, V. Thunderstorm at night.—*Bincombe House*, V. Thunder and lightning at night.

NOVEMBER.

1st.—*Druid*, V. Fog all day, torrents of rain at night.—*Melrose*, XII. Fog.—*Tubrid, Cahir*, XXI. High N.E. wind, and 1·29 in. of rain.

4th.—*Stanley Vic.*, IX. Thrush and starling singing.

5th.—*Addington*, III, and *Compton Bassett*, V. Dense fog.—*Middlesborough*, IX. Snow.

7th.—*Stanley.* First autumn frost.—*Strathconan*, XVIII. High wind, stacks blown over.

9th.—*Melrose.* High S.W. wind.—*Dalnaspidal*, XVI. Sleet and rain.

11th —Snow at *Enfield*, I.—*Pinner Hill*, I.—*Forest Lodge*, II.—*West Tofts*, IV.—*Diss*, IV.—*Partney*, VII.—*Stanley Vic.*—*Middlesborough.*—*Melrose* and *Innerhadden*, XVI.—At *Druid* hail fell, and at *Coston*, VII.; and *Castle Malgwyn*, XI. it is said to have been windy,

13th.—*Sprowston*, IV. Very stormy and gusty.—*Sansaw*, VI. Great variations in temperature, being the hottest day and coldest night in the month, the max. being 64°, and the min. 21° difference 43°.

15th.—Slight shock of earthquake in N. Wales at 1.50 a.m.

19th.—*Addiscombe*, II. Hailstorm for about 5 minutes at 3 p.m.—*Calcethorpe*, VII. Thunder in N.W. at 1.30 p.m.—*Glasgow*, XIV. Thunder, lightning, and very large hail.—*Cambuslang*, XIV. Thunderstorm.

20th.—*Shap*, X. Sharp frost at night.

21st.—Thick fog in the midland counties.

23rd.—*Bucknall*, VII., and *Nairn* XVII. Thick fog, low temperatures prevalent.

25th.—Snow reported from *Pinner Hill*, I.—*Addiscombe* (with rain) *Swallowfield*, II.—*Adstock*, III.—*Addington*, III. (4 in. deep.)—*Burnham*, V. (on the hills), *Hagley*, VI. (began at 6.30 p.m., after rain all day).—*Brereton*, VI. (began heavily at night and continued through the 26th).—*Coston* (at night).—*Mansfield*, VII. (more than 4 in. deep); *Stanley*, heavy at night after rain all day; at *Druid* no snow fell, but thick fog prevailed with heavy rain.

26th and 27th.—Snow and frost generally.

28th.—*Enfield*, I. On the night of this day the wind blew heavily from S.E., but moderated in the morning, and shifted gradually to W.S.W. by 11 a.m. on 29th, when it again rose to a heavy gale, and blew with tremendous force 1 to 5.30 p.m.; a most rapid fall of the bar. took place on the night of the 28th, at 6 p.m. the reading was 29·33, at 8 29·15, at 9 29·02, at 10 28·96, at midnight 28·81, at 6 a.m. 29th, 28·50, over 0·80 in 12 hours, 9 a.m., 29th, 28·49, and at 11 a.m. 28·44, after which the mercury rose to 28·75 by 9 p.m., but fell again to 28·65 by 8 a.m. on 30th, after which it rose steadily.—*Muswell Hill*, I. 1·02 of rain fell in the 24 hours between sunset on the 28th and sunset on the 29th.—*Hailsham*, II. Very high wind and heavy rain.—*Andover*, II. Violent storm of wind and rain (1·02).—*Diss.* Gale from S.E., heavy in the afternoon.—*Sprowston.* Heavy rain in the night, and rapid fall of the bar.—*Beaminster*, V. Very stormy,

rain 1·63.—*Druid.* Very heavy rain in the evening and night (1·43). *Coston.* Very rapid fall of bar. 1 in. between 9 a.m. on 28th and 9 a.m. on 29th, heavy rain and thaw after 6 p.m. on 28th.—*Gainford.* 9 a.m., bar. 29·64, 11 p.m. 29·43, 29th, 9 a.m. 28·70 2 p.m. 28·53, when it began to rise.—*Woodlands.* Fine day but heavy rain in the night, and falling bar. registering 28·29 on the 29th, above sea level 303 ft.—*Llanfrechfa.* The mercury in bar. fell ·56 between 9 a.m. and 10 p.m., on 28th, and ·36 from that time to 9 a.m. on 29th, when it began to rise; there was heavy rain on the night of the 28th, the following morning was fine till 9 a.m., then very high wind W. by N., till 11 a.m.—*Alma House, Sydenham,* XXIII. 1·85 in. fell, causing great floods in many parts of the country.

29th.—*Enfield.* Vivid lightning in S. and S.W. 5 to 10 p.m. —*Addiscombe.* Lightning in N.E. 7 to 9.30 p.m.—*Sprowston.* Wet evening and gale from S.S.E. S. and S.S.W.—*Compton Bassett.* Strong gale from N.W., rising suddenly at 10 a.m., and subsiding at 6 p.m.—*Druid Ashburton.* Hurricane all the morning. —*Kilworthy Hill.* High wind.—*Burnham.* Heavy gale.—*Coston.* Heavy showers occasionally, and very high wind.—*Castle Malgwyn.* Stormy with slight showers.—*Strathconan.* 2·59 the heaviest fall I have measured.

DECEMBER.

3rd.—Sharp frost; the following are minima reported for this date, *Brampford Speke, Exeter,* V. 13°, *Pentillie Castle,* V. 23°.

6th.—*Partney,* VII. High N.W. wind and rain.—*Ballinasloe,* XXII. Lightning at 6.30 p.m.

7th.—*Strathfield Turgiss,* II. Heavy gale.—*Innerhadden,* XVI. The high grounds and glens are giving great anxiety to the sheep farmers, owing to the severe storm; it is said by the people to be the worst winter (as yet) they ever saw at such an early date.

8th.—*Middlesborough,* IX. Heavy N.E. gale in night.—*Woodlands, Elterwater,* X. Snowing until noon, afterwards rain; windy at night; total fall 1·78, max. of month.—*Llanfrechfa,* XI. Heavy rain (2·00) and high wind all day.

9th.—*Sprowston,* IV. Gale from N., from 7.30 a.m. to noon, with showers; bar. fell very rapidly during the night.—*Partney.* Strong gale from 5 to 8 a.m.

10th.—*Coston,* VII. Heavy fall of snow.—*Partney.* Snow in night.

12th.—*Shap,* X. Rain and snow, one flash of lightning at 4·30 p.m.

—*Innerhadden.* All we can do is to keep the roads open, snow plough in constant work, drawn by four horses ; sheep stock very hard up for food, and if this weather continues it will be ruination to many of the stockholders.

14th.—*Sprowston.* Showers of snow and sleet during night.

15th.—*Ballinasloe.* Lightning at 0.30 a.m.

15th and 16th.—Heavy fall of snow over the South-East and West of England, observers are almost unanimous in stating it to have been 11 inches deep ; in most cases it remained unmelted until the end of the year.

22nd.—Severe frost, the reported minimum is 19° at *Dorking,* II. dense fogs prevalent and at *Addington,* III. the max. was 28°.

23rd.—*Forest Hill,* II. Rime in thorn-like spikes half-an-inch long on the trees, and ice *spiculæ* floating in the air.

24th.—*Addiscombe,* II. Min. in air 14°.—*Forest Hill.* Min. temp. of month 16°, the lowest since January, 1871.—*Addington.* Ther. stationary at 17° till 4 p.m., when it suddenly fell to 14°, the min. of the month.

25th.—*Pickenham,* IV. Ther. down to 10°.

26th.—*Ipswich.* Ther. down to 13°.—*Bingfield House, Hexham,* X. Min. 10°.

28th.—*Meshaw,* V. Remarkable fall of snow on this and the next day, depth average 17 inches, so far as known the heaviest fall during 43 years which I have resided here, I remember one snowfall of more than 12 inches, without drift, in 1853, but none exceeding that.—*Glasgow.* Min. 6°.

29th.—The following are a few reported temperatures :—*Sprowston.* Min. 5°.—*Partney.* 9 a.m. 5°, 9 p.m. 3°.—*Stanley Vic.,* IX. Min. 8°, on grass 5°.—*Melrose.* Min. 5°. The notes respecting the depth of snow are unimportant, except the following :—*Druid.* Snow seven inches deep, and followed on the 30th by five inches more.—*Brampford Speke.* December 28th, 29th, and 30th, snow deeper than has been known for many years, about 18 inches deep on the level, not at all drifted.—*Ivy Tower, near Tenby,* XI. Snow when melted produced ·81, the depth of snow which was very even on my lawn was about 10 inches.—*Castle Malgwyn,* XI. Snow to the depth of eight inches fell at night.

30th.—*Melrose.* Snow and lightning at 9.20 p.m.—The temperatures reported include—*Berkhempstead,* III, 13°.—*Oxford,* III. 13°.—*Pickenham.* 5°.—*Saul Lodge,* VI. 15°.—*Coventry,* VI. 16°.—*Partney.* −1°·0,

and 9 a.m. 8°.—*Walton*, VIII. 12°.—*Derringham*, IX. 7°.—*Bingfield House, Hexham*, X. −2°.—*Melrose*. 5°.—*Leochel Cushnie*, XVII. 4°.

31st.—Temperatures still very low ; it fell to 18° at *Dorking*, to 20° at *Forest Hill*, to 9° at *Chapel Hill, Basingstoke*, II., to 12° at *Round Oak, Newbury*, II., to 12°·5 at *Berkhempstead*, to 13°·6 at *Tytherton*, to 5° at *The Graig, Ross*, VI., to 13° at *Staunton Long*, VI., to 16° (and 11° on grass) at *Sansaw*, VI., to 13° at *Brereton*, VI., to 5·5° at *Mansfield*, to 16° at *Hagley*, to 10° at *Worksop*, VII., to 14°·6 at *Halifax*, to 4° at *Beverley*, IX. (the coldest since 1854), to 12° at *Derringham*, and to 1° at *Castle Malgwyn*.

OBSERVERS' NOTES ON THE MONTHS.

JANUARY.

I.—*Harrow.* A dull, heavy, damp month; but I saw the rooks building on the 12th, in Jockey's Fields, Gray's Inn, and we have the early warblers here.—*Muswell Hill.* Total fall below the average, and below that of 1873, by 1·20 in. and that of 1872, by 2·48.—*Winchmore Hill.* This month (like December) has been dry, mild, and very cloudy, with an almost uniformly high bar. and but little wind; vegetation is in a very forward state.

II.—*Addiscombe.* Bar. unusually high, and temp. also, but rather variable. On only 4 days (the 13th, 22nd, 25th, and 31st) was the temp. at 9 a.m. more than 1° below the computed 9 a.m. average at Greenwich, while on the 14th it was 48°, or 13° above it, and on the 20th it was 16° above average and 1°·8 above any 9 a.m. temp. in January, 1873. A generally moist atmosphere, the degree of humidity being on only 3 days (7th, 17th, and 30th) below 70 at 2 p.m. The rainfall was moderate and equally distributed. Wind at 9 a.m. on only one day (8th) from any easterly point.—*Tunbridge.* Very dry warm month, snow on only one day.—*Forest Hill.* Very mild.

IV.—*Diss.* Splendid weather throughout, only a few flakes of snow on two occasions, and no severe frost. Young wheat and other crops looking well. The epidemic of scarlatina is a thing of the past; bronchitis, influenza, rheumatism, and quinsey, are rather prevalent. *West Tofts.*—Weather very mild and open; birds sing harmoniously in the early morning, putting one in mind of the month of April; the weather very much resembles the winter of 1862-63.—*Sprowston.* A mild, fine month; very little frost, and no snow, except a few flakes on the 5th and 17th; rainfall 0·86 below the average for the past 32 years.

V.—*West Tytherton.* Mild, dull, damp, and foggy.—*Zeal Monachorum.* Stormy and wet.—*Falmouth.* Very mild throughout (buds

beginning to shoot); and weather more like March or April than January.

VI.—*Sansaw Hall.* The mildest month of January that I can remember, 11 nights min. at 40° or above, 44° on 15th and 16th, and only seven on which it was below 32°; partridges paired or pairing before the end of the month.—*Oscott.* Prevailing winds S. to W. and high bar.; the sky generally cloudy.

VII.—*Coston.* A very mild month on the whole; prevailing winds S. and S.W. *Partney.*—The very rare occurrence of N. winds seems to me remarkable; the prevailing winds were W., S.W., S. and S.E.—*Bucknall.* Westerly winds on 26 days.—*Calcethorpe.* The latter half of the month fine and dry, with very high bar. after the 21st; a little snow fell on the 4th which is all we have had this winter.

IX.—*Moorside, Halifax.* Remarkably mild month; westerly winds prevailing (with few exceptions) throughout.

X.—*Woodlands, Elterwater.* I have for weeks observed many remarkable effects of the mild weather in several places, in this district; I have seen palms slightly in bloom, honeysuckle almost in full leaf, and many shrubs in bloom or in leaf; the last six days of the month mild and calm, considering that the wind was northerly.—*Measandbecks.* Heavy showers occasionally during the former part of the month, latterly more than seasonably fine.

XI.—*Llanfrechfa.* The month has been remarkably mild.—*Castle Malgwyn.* The weather during the month has been unusually mild, so much so, that many shrubs and plants are in flower which we do not expect to see till March; I dread the consequences which may follow, and fear another fruitless year.—*Trevalyn.* An unusually mild month, the mean temp. being 42°·7 and the min. 27°.

XIII.—*Melrose.* The month has been unusually fine; the prevailing wind on 23 days was between W. and S. and on the last day of the month the roads were as dusty as in summer.

XIV.—*Holehouse.* Remarkably mild for January; there were only two or three mornings on which frost was observable; fields are as green as if it were April.

XVII.—*Tomintoul.* This has been the mildest January here within the memory of man; snow was rarely seen, and when it did come it was very slight.

XVIII.—*Strathconan.* Snow seen on the hills on the 9th, and remained there for a week; some of the drifts were very deep.

XXII.—*Ballinasloe.* The general character of the month was mild;

mean temp. being 39°·8.—*Doo Castle.* Fine month; the birds singing; the season seems entirely changed.

FEBRUARY.

I.—*Hanwórth.* Uncommonly dry weather for the time of year, and an unusual prevalence of fogs (more like November), with their usual accompaniment of a high bar.—*Muswell Hill.* Another month of rainfall below the average, the first half being especially dry, only ·19 having fallen in the first 15 days, and in the after part, only two days on which the fall reached ·10.—*Winchmore Hill.* Frost on 14 nights, and on grass 18.

II.—*Bromley Common.* A fine month on the whole, though there have been many fogs; the mean. temp. a trifle below the average (19 years); the rain 0·16 above the average (9 years).—*Tunbridge.* Temperature slightly below the average, and rainfall above it; air very damp, and 15 frosty nights.—*Andover.* This has been a month of the greatest mortality I have known.

IV.—*Diss.* Splendid weather throughout, a few days of continued frost in the second week; farms and gardens looking well; no prevalent epidemic.—*Sprowston.* A fine month, only 1 in. of rainfall, including ·07 which fell as snow and melted almost as soon as it fell; a few frosts, but on four or five occasions the ther. registered over 50°.

V.—*Dartmoor.* Remarkably mild and fine month; spring flowers appearing and early trees budding.—*Zeal Monachorum.* Very mild month.—*Falmouth.* First 10 days very mild and dry; the weather generally fine, only 4 stormy days in the month; slight frosts on three mornings.

VI.—*Oscott.* The month has been cloudy, fog prevalent in the first week, temp. low, wind moderate.

VII.—*Coston.* A fine month on the whole; mean temp. higher than 1873; the latter part of the month mild, plants and trees very forward. —*Partney.* S. and W. winds continue.—*Calcethorpe.* Fifteen days without rain, viz.: from January 24th to February 7th, inclusive. —*Mansfield.* The whole month has been more or less dry, and very mild towards the end, with beautiful sunshiny days; the rain chiefly at night; frosts in the middle of the month of great use in checking the vegetation, which bids fair to be too far advanced.

X.—*Woodlands.* Less rain than the average for February during the last five years, although more fell than in last February; in consequence of the number of frosty days, vegetation did not progress so

rapidly as in January; the mean temp. was 38°.—*Easedale, Grasmere.* Very fine weather.—*Measandbecks.* Dry, and a little frost during the first two weeks, afterwards heavy showers occasionally.

XI.—*Castle Malgwyn.* Like the last month, this has been generally very mild; many plants in flower.

XVII.—*Nairn.* Remarkably fine month, and with the exception of a high wind on the 26th, generally mild with a high temp. and clear sky.

XVIII.—*Budgate, Cawdor.* Generally very dry.

XXII.—*Ballinasloe.* The rainfall was nearly 7 in. less than in the corresponding month of 1872 and 1873.—*Doo Castle.* Fine open month and, excepting a few days, the weather like that of advanced spring.

MARCH.

I.—*Harrow.* The weather was as remarkably dry as during the preceding three months; the total rainfall from December 1st, 1873, to April 1st, 1874, being only 3·85 in.—*Muswell Hill.* Total fall (·67) considerably below the average, the peculiarity being the very small amount when it did fall; thus, though it is recorded on 15 days, the max. was only ·12, occurring on the 9th, and on no other day did it reach ·10 in.

II.—*Tunbridge.* A mild month, but a great deal of snow between the 9th and 12th.—*Forest Hill.* Second week very cold, windy, and snowy; remainder of month mild and dry; hardly any E. winds, winds mostly between N. and S.W.; bar. on 6th, reduced, 30·73; ground very dry at the end of the month.—*Hailsham.* Very warm about the 23rd.

III.—*Adstock.* On the whole a very favorable month for farmers.

IV.—*Boxford.* The last four months have been remarkably dry; the total is under three inches: December ·56, January ·94, February ·68, March ·64, 2·82.—*Diss.* Beautiful weather, with the exception of the sharp little winter from the afternoon of the 9th to the 14th, during all which time the snow was on the ground; field crops and gardens are looking well; a want of soft water is much felt in places; influenza and rheumatic affections very prevalent.—*West Tofts.* Very strong winds the last three or four days.—*Wereham.* Severe frost set in on 4th, and increased until the 11th, when the temperature fell to 12°·6, the lowest I have ever observed in March.—*Sprowston.* Snow fell on four days but quickly melted; ·91 in. of rain has been registered,

exactly 1·00 in. less than in March, 1873, and more than half-an-inch under the average; in fact, the last six months have been very dry, for I have recorded only 6·82 in., instead of 11·77 in., the average for the last 32 years; March has been, with the exception of the second week, remarkably mild; ther. on two occasions registering 64°; there has been almost an entire absence of E. winds.

V.—*Compton Basset.* The highest temp. in the shade, four feet from the ground, 65°, occurred here on the 27th, and the lowest 18° on the 12th, when ice on a deep pond measured half-an-inch in thickness; snow fell on three days, and the rain gauge collected ·01 twice from white frosts; during the first part of the month the winds were gentle, in the latter part strong and sometimes boisterous.—*Chalbury.* Unusually dry, only 0·34 in. of rain in the whole month.—*Trevarrick.* The only snow during the winter fell on March 9th, 10th, and 11th.

VI.—*Oscott.* Gales or strong winds in the middle of the month and at the end, chiefly southerly or westerly.

VII.—*Coston.* A month of extremes; very mild at the beginning and towards the end of the month, but very cold from the 9th to the 12th, inclusive; the last few days, the wind (S.W.) very high day and night; it is to be feared that the severe frost of the 11th has cut the laurels, deodars, &c.; two thermometers, at Wyndham, recorded −1° on that night, my minimum was 5°.—*Bucknall.* A month of extremes of temperature.—*Calcethorpe.* Mean temp. for week ending on 14th, 32°·8.—*Mansfield.* The snow that fell on the 9th, 10th & 11th is the only noteworthy fall during the winter; prevailing winds of the month, south-westerly; the advancing vegetation much checked during the month.

IX.—*Stanley.* The wind has been chiefly W., W.S.W., and S.W.

X.—*Woodlands.* An extremely variable month and particularly as regards temperature, which was about $3\frac{1}{2}$° above the average of the last five years.—*Measandbecks.* Generally dry first half of the month, afterwards occasional heavy showers to the end; very little frost.

XIV.—*Holehouse.* The latter part of the month very wet, cold, and stormy, and very unsuitable for farm work.

XVI.—*Innerhadden.* Several days of the month were as warm as midsummer, and vegetation was thus pushed forward to a dangerous extent; no snow except on the hill tops.

XVII.—*Mulben.* Very rough and stormy, with the exception of three days, from the 24th to the 27th, which were extremely mild for the season; notwithstanding the high winds we have had, accompanied

by rain and sleet, the farmers are further advanced with out-door work than they have been for many years.

XXI.—*Dublin, Eccles Street.* Up to the 7th the weather was warm and dry with a high bar. ; on the night of the 7th bright aurora appeared and was followed the next day by cold rain with high wind, which veered from S.W. to N.W. ; frost succeeded, with slight showers of snow and hail, until the 13th, when the weather became warm again and generally continued so till the 27th, when the wind rose from the westward and the rest of the month was stormy and showery.

XXII.—*Ballinasloe.* The prevailing winds were southerly ; from the 24th to the 31st there was a constant high wind, chiefly from S. or S.E., but on the last two days from the W. with heavy squalls of rain and hail ; mean temp, of month 45°·9.

XXIII.—*Ramelton.* Mean temp. lower than in any of the winter months ; from 26th the end of the month boisterous weather with squalls from W.N.W. accompanied by thunder and hail.

APRIL.

I.—*Harrow.* The month has been very trying with extremes of temp.; min. on 5th and 10th 26°, max. on 23rd 76°.—*Muswell Hill.* Rainfall for the first half of the month rather above the average, but the second half was excessively dry, no rain being recorded after the 17th.—*Winchmore Hill.* Another dry month, not a drop of rain having fallen after the 17th.

II.—*Riverhead, Sevenoaks.* Remarkably warm with westerly winds till the 28th, when cold E. winds set in, with sharp frosts, which did much damage to fruit blossoms, &c.—*Bromley.* Wet at the beginning, but fine from 13th ; all birds late in their arrival this year.—*Forest Hill.* First half of the month low, unsteady bar., much rain, cloudy skies, and variable winds, at times blowing a gale ; the second half was a remarkable contrast, the bar. being rather high and very steady with no rain to speak of, clear skies and light winds, mostly easterly ; the temperature rose very high after the 20th, the diurnal range being very great on some days, notably on the 21st 39°·1, and on the 30th 40°, the latter range being the greatest I have ever registered, the total range in the month 50°·3, is also the max. range I have ever observed ; the ground very dry at the end of the month.—*Hailsham.* No rain after 12th, very hot after the 20th.—*Andover.* The month has been unusually warm ; scarcely any rain after the 13th ; prevailing wind E.

III.—*Addington.* Very warm from the 21st to 27th, the min. temp. on 24th, 25th, and 26th was 50°, and the max. 75° on 21st, 23rd, 24th, and 27th ; the min. of the month was 30° on the 30th.

IV.—*Diss.* The month generally warm and genial, the latter half bright and splendid with high temperature ; on the morning of the 30th, however, a sharp frost did some mischief to the potatoes and probably to the early fruit ; garden and field crops are generally looking well, but towards the latter end of the month the later barley is beginning to show the want of rain ; the lambing season has been very favourable ; in spite of the warm weather, throat and pulmonary attacks and influenza have been very prevalent ; if the frosts of May are not severe, we shall have a great apple crop, which has not been the case for several years.—*Sprowston.* The first half of the month showery with one or two slight frosts ; not a drop of rain fell after the 15th ; extremely warm at times, and on the 21st the ther. in the shade was 74°·5 ; total rainfall 1·08, about half-an-inch less than the average.

V.—*Compton Basset.* No rain fell after the 18th, and only ·07 after the 13th ; the sun being powerful has caused vegetation to advance rapidly, but the frost on the 30th has browned the potato haulms around here.—*West Tytherton.* A very warm dry month.—*Dartmoor.* Dry easterly winds the latter half of the month.—*Falmouth.* Scarcely any rain fell after the 13th.

VI.—*Oscott.* First part of the month wet, latter fine with summer temp., except occasionally on the grass.

VII.—*Partney.* The latter part of the month remarkably dry and warm.—*Mansfield.* The month has been remarkable for the great heat of the last ten days, the highest registered in the shade was 77°·8 on the 26th, the variation between the temp. of the 27th and that of the night of the 28th was 46°·3.

IX.—*Stanley.* A few swallows were seen here for a short time on the 24th, 30th, and 31st of March, and on the 4th of April, but they then disappeared and the main body were first seen about Lake Bridge on the 22nd ; remarkably fine weather towards the end of the month for setting the fruit, no frosts after the 12th till the night of the 28th.

X.—*Woodlands, Elterwater.* Mean temp. of the month 48°·7, being 3°·6 above that of last April ; the heat during the latter part of April may well be noticed, on five days the ther. marked 70° or upwards.—*Measandbecks.* First fortnight showery, afterwards generally hot and dry, with some frosts at night.

XI.—*Castle Malgwyn.* The first fortnight was wet and little could be done in farm or field, during the latter half of the month cold N. and N.E. winds prevailed, which checked vegetation very much; fruit will be a scanty crop in this neighbourhood.—*Heyope.* This month was particularly warm for the time of the year.

XIV.—*Holehouse.* No rain after the 16th.

XV.—*Glengorm.* Very wet and stormy at the beginning of the month, very fine and warm at the close.

XVII.—*Mulben.* April has, upon the whole, been favourable for the agriculturist, although somewhat cold and unsteady, but according to the general belief, the seed or grain has not been got into the ground in such good condition for many years.

XVIII.—*Strome Ferry.* Total fall of rain in April 6·07 in., of which 4·37 in. fell during the first four days.—*Strathconan.* Country flooded at the beginning of the month.

XIX.—*Lairg.* Month generally fine.

XXII.—*Ballinasloe.* The month came in with high winds and the early part was very wet, but the latter part was unusually warm and fine, a high warm wind (S. or W.) prevailing, the highest temperature in the shade was 70° on the 27th; mean temp. of month was 50° being 2° higher than that of April, 1873.

MAY.

I.—*Hanworth.* Temp. down to 27° almost every night until the 10th, and down to 28° on the 20th; these frosts have been hurtful to the potatoes especially, and apparently to the young leaves of laurels.—*Harrow.* One of the coldest, driest Mays I remember, since 1835, but I think 1838 was almost as bad. The martins which appeared on the 20th of April, seemed to have gone off again about the 2nd of May for some days; the ash was very late in leaf.—*Muswell Hill.* Another month with the rainfall below the average, being the fifth this year; the period of drought from the 18th of April to the 13th of May, both included, was remarkable, there being virtually no rain during that period, 26 days, 0·04 only having been recorded, and that on 3 separate days.—*Winchmore Hill.* Another month of drought, making six in succession; the total fall this year is only 5·26 and since Nov. 1873, 5·77 in.; the fall in May was almost entirely the product of thunderstorms; frost on no less than 10 nights, and on grass on 18 nights; max. 77° on 25th, min. in air, on 10th, 26°·5.

II.—*Tunbridge.* Dry month, with easterly winds.—*Riverhead.*

Remarkably dry month, with sharp night frosts about the middle of the month; rain fell in heavy showers within a few miles of Riverhead, on Whit-Monday (25th) and following days, but beyond one moderate shower on the afternoon of the 25th, none fell in this immediate neighbourhood.—*Bromley.* Winds north-easterly throughout, with frequent frosts which did much damage.—*Forest Hill.* Temperature much below the average till the 22nd, after which date it was high, much cloud; a prevalence of polar wind, and frequent frosts, only 0·47 in. of rain fell during the month, as the thunderstorms of the 22nd and 25th were not much felt here; the total rainfall for the first five months of this year has only been 4·67, and for the six months, including Dec. 1873, only 5·06; the ground is very parched and cracked; but the trees seem little affected by the drought.—*Hailsham.* North winds till towards the end, when it was much warmer.—*Alton.* Only three days on which rain fell, viz., 16th, 24th, and 30th; total fall 0·58.—*Andover.* Cold E. winds and scorching sun prevailed.

III.—*Addington.* The early part of the month particularly cold; the warm weather during the latter part of April caused the young shoots on many trees to be rather far advanced, in most instances they have been quite destroyed; such trees as common spruce, scarlet oak, sweet chesnut and various others, were quite cut back to the old wood; the mean min. of the first 14 days was about 34°·7, being very little more than the first fortnight in January, which was 32°·5; from the 22nd it was much warmer, the max., on the 27th, 30th, and 31st, being 70°; the min. on the 9th, 11th, and 18th, was 29°.

IV.—*Diss.* The first half of the month was cold, with sharp night frosts, and wind from N.W. or N.; potato crops very badly nipped, and wall fruit blossoms fell off without setting; after the 15th the weather became fine and summer like; but the want of rain is beginning to be felt, only ·02 having fallen from that date to the end of the month; during the first five months of the year we have only had 4·47 in., and the showers and thunderstorms of which we have heard to our N., S., E., and W., have not reached us; nevertheless, the garden crops look fairly well, and are very free from the attacks of worms and slugs, and the potatoes are recovering themselves; the grass crops will be very short, and on the lighter lands the barley looks weak and rather yellow, otherwise I should say the field crops look well; bronchitis and throat affections were very prevalent during the first cold fortnight, and bilious attacks with febrile complications in the latter half of the month.—*West Tofts.* Cold, with frosty nights

during the early part of the month.—*Sprowston.* Very cold for the first three weeks, bright and warm after the 21st; rain fell every day from the 1st to the 15th, but only in small quantities, the total fall (1·32) is more than half-an-inch below the average; several frosts during the first three weeks, but there is a very good show for fruit.

V.—*Compton Bassett.* The ungenial weather in the middle of the month has caused much mischief in the gardens round here, owing to vegetation being in a state of tender forwardness, caused by the unseasonable heat of April; the result is, that vegetation in the lower lands has been seriously injured, whilst that on comparatively elevated situations has almost escaped, and only shows a browny leafage. —*Beaminster.* North-easterly winds very prevalent.—*Druid Ashburton.* Frequent white frosts during the first half of the month.—*Falmouth.* A pleasant month.—*Taunton.* From the great deficiency of rain the grass crops are very scanty. —*Burnham.* Rain on only five days, total of month 0·67 in., 0·43 of which fell on 3rd.

VI.—*Sansaw Hall.* As unusually cold as April was warm; much damage done by the frosts to early potatoes, gooseberries, and black currants, especially the latter.

VII.—*Coston.* Another very dry month; the rainfall being more than 1½ in. less than fell in May, 1873; the rain is apparently very partial, as it seems to have fallen in greater quantities on all sides; prevailing winds N. and N.E., on every day except 6th, 7th, and 26th, to 31st inclusive; vegetation made great progress after the change on 26th.—*Partney.* Remarkably cold except towards the end; the rain below the average; the frosts have been injurious to the spring crops and to vegetation generally.—*Bucknall.* Very dry month, with several frosts, thick ice on the 18th; ash scarcely in leaf at the end of the month.—*Calcethorpe.*—All crops sown before the 1st of April look well, those sown since have suffered much from the dry weather and frosts.—*Mansfield.* A very cold, and, till near the end, disagreeable month; a great contrast to the warmth of April; the wind N., N.E., and N.W. all the early part.

IX.—*Halifax.* Wretchedly cold and dull throughout; wind persistently E., from the 23rd April to the 27th of May; min. temp. down to 23° on the 2nd and 9th.

X.—*Birkside.* There was no rain here till the 25th.—*Woodlands, Elterwater.* Great damage done to the crops of all kinds, in this district, mainly by the frost on the 15th, when the ther. marked 23° on grass (27° in air); oak and ash were also blackened, and even now (the 1st of June) they have not recovered; mean temp. 49·°6.

—*Measandbecks.* First three weeks dry and cold, with occasional snow and hail showers and some frost; last week at times heavy showers.

XI.—*Llanfrechfa.* Unusually dry; the nearest like it being May 1866; storms in this neighbourhood, but very little rain.—*Dingestow.* Very cold for May, till the last week.—*Castle Malgwyn.* All the month has been very cold with raw E. winds and occasional frosty nights, which have considerably checked vegetation; in many places the potatoes were killed to the ground; not like May, but such weather as we wish to see in March.

XV.—*Glengorm.* May 1st to 15th fine but cold weather; wind ranging from N.N.W. to N.E.; 15th to 24th very fine and warm; 25th to the end soft genial rain.

XVI.—*Innerhadden.* This month has been very favourable for the sheep and lambs, also for working arable land; we were just on the point of complaining for want of water on the 21st, when 0·40 in. fell; in the lower parts I hear that the corn, &c., has suffered very much, but here we are now safe.

XVIII.—*Springfield, Tain.* Cold easterly winds during most of the month.—*Sligachan.* Total fall 5·12 only one-eighth fell during the month up to the 27th.—*Budgate, Cawdor.* Dry, cold E. wind.

XXII.—*Ballinasloe.* The rainfall is slightly below that of the two preceding years, it being 2·18 in. 1874, 2·27 in. 1873, and 2·33 in. 1872; the mean temp. was 54°·4, being 0°·5 higher than 1873, and 2°·7 higher than May, 1872.

JUNE.

I.—*Muswell Hill.* For the first time this year the total fall has reached the average, the first three weeks were very dry though the moderate falls of the 2nd, 6th, and 18th, kept the gardens from suffering.—*Pinner Hill.* Wind N.E. on 13 days, E. on four days.

II.—*Tunbridge.* Thunder heard only on one day; bar. very uniform, general direction of the wind E.—*Bromley Common.* June has been a dull and rather cold month; ther. on grass at a garden near here fell to 28° on the night of 12th; potatoes were injured, hay harvest very light and backward.—*Forest Hill.* First 11 days warm, then cold to the end; only four wet days till the 24th, then wet to the end; total fall from January 1st to June 30th has been only 7·20 in.; N.E. wind unusually prevalent this June.—*Andover.* During most of the month intense dry heat prevailed.

III.—*Addington.* From the 11th to the 21st the wind was in the N.N.E., during which time we had some very cold nights; on the 11th, 12th, 13th, and 14th the ther. read 38°, 39°, 34° and 37°; it fell to 40° or under on nine occasions, the min. being 34° on 13th.—*Oxford.* Only half-an-inch of rain fell during the month.

IV.—*Ipswich.* Many cold days and frosty nights about the middle of the month.—*Diss.* The weather has varied greatly during the month; vegetation had begun to suffer seriously from the drought which succeeded the fall on the 2nd, and trees, as well as shrubs and plants of smaller growth, looked sickly and flagging; the severe frost too of the 12th and 13th caused much mischief; the rain on the 16th (0·45) came just in time to save much field and garden produce, which would otherwise, I think, have been lost; before this date (16th), the hay crops were very short, although what was carried was in good condition; afterwards the quality greatly improved, and as there is much old hay about, from the abundant crops of last year, we shall not, I trust, run very short; at the close of the month the weather was fine and seasonable, and both fields and gardens looked well.—*Sprowston.* About the average fall of rain, 1·78, here, but the fall appears to have been very partial in this county, some villages not having had more than half-an-inch.

V.—*Beaminster.* N.E. winds prevailing during the early part of the month; only 0·10 in. of rain fell till the 24th, after which it fell daily to the end.—*Compton Bassett.* Exceedingly dry and sultry, but the nights chilly; the excessive drought has told on both wheat and barley, and most of the swedes will have to be re-sown, the fly having eaten the young plants; the hay crop is light; in gardens the frost on the night of the 12th, blackened and cut down the tops of the potatoes, for the third or fourth time this season, and severely injured crops of french beans and the young growths of trees and shrubs.—*Tavistock.* No rain fell till the 23rd.—*Court Barn.* Up to the 22nd the nights cold with occasional frost; no rain and very scorching sun; the grass on lawns or fields very much dried up; corn, especially spring crops, very short and thin; mangolds sown at the end of April not generally up; caterpillars on gooseberries, and insects on foliage very abundant.—*Zeal Monachorum.* From May 27th to June 16th, no rain.—*Burnham.* Total for the six months 7·90 in.; no rain till 23rd.

VI.—*Brereton, Leamington.* Extremely dry, not bright sunny weather as might be expected, but dull and cold; northerly winds prevailing for 15 days.—*Hagley.* A singularly dry month until the last

week, in which there were two thunderstorms, the latter of which on the 27th was accompanied by violent hail.

VII.—*Coston.* Another dry month with the exception of the last 10 days; pastures, previous to this rain, were being very much dried up.—*Calcethorpe.* No damage done to crops, either by frost or storm, at present; wheat generally good; barley and oats will be light, in consequence of the long dry time before the 22nd, this rain just came soon enough to save the turnip crop, which now generally looks well. —*Appleby.* Not a drop of rain till the 23rd.—*Mansfield.* The month has been remarkable for its extreme dryness, everything has been parched up, and the fruit has, in many cases, fallen off the trees; thunderstorms occurred in the neighbourhood, but none of any note in Mansfield; total fall of rain less than half-an-inch.

VIII.—*South Shore, Blackpool.* June, 1874, was the driest month in 17 years, evaporation being 5·30; in June, 1857, it was 5·35.

IX.—*Stanley, Wakefield.* At the beginning of the month rain was greatly needed, and as scarcely any fell till 22nd, the grass for hay was so parched that it required no spreading, and was carried in two days after it was cut; immediately after the fall of rain, on the 22nd, the grass recovered rapidly, but the hay crops were light.

X.—*Woodlands.* Mean temp. 55°·2, about the average of the last six years; total rainfall for the six months, ending June 30th, 34·42 in. —*Measandbecks.* First three weeks dry, with frosts; last week thunder with occasional heavy showers.

XI.—*Llanfrechfa.* Very cold till the 23rd.—*Dingestow.* Very hot and dry.—*Castle Malgwyn.* I never saw such weather in June, the combination of frost and cutting winds severely injured crops of all kinds, both in garden and farm; hay a very light crop, and straw will be short.—*Heyope.* The month has been peculiarly cold and frosty.

XII.—*Melrose.* Scarcely any rain till the 22nd; a very dry month; nearly all the rain that fell was from thunder clouds; thunder almost daily, from 22nd to the 29th.

XVII.—*Keith.* Vegetation made little progress; cold winds from N. and N.W., with slight frost at night, from 1st to 20th; on the 21st welcome rain fell, and from that date to the end of the month vegetation made rapid progress.—*Mulben.* This month has, upon the whole, been favourable for the agriculturist, although a little more rain would have been acceptable for the turnip crop, nevertheless a full average is expected; the hay crop will be light.

XIX.—*Lairg.* No rain between 12th and 24th, but heavy dew.

XXII.—*Ballinasloe.* Temperature of the month was 3°·3 less than June, 1873, and 3° higher than June, 1872; the greatest range of thermometer was on the 18th, when the max. was 70°, and min. 44°, diff. 26°.

JULY.

I.—*Muswell Hill.* Another very dry month, the total fall, 0·88, is exceedingly small for July; the partial character of the rain which has fallen in the neighbourhood of London this month is very remarkable, especially as regards the way in which the rain appears to have avoided this particular locality; thus, on the 11th, at Edmonton, which is about five miles E.N.E.; at Watford, about 12 miles N.W., and in the middle of the City, six miles S., such heavy rains fell, as produced temporary floods in the first two places mentioned, whilst here the fall amounted to 0·10 in. only; the same has occurred on other days especially on the 23rd and 24th.

II.—*Bromley.* Very dry and hot month; harvest very early in this neighbourhood; apparently there has been much more rain round about us than here.—*Forest Hill.* Great drought and heat prevailed during the first three weeks, after which it became cooler, with rain and S.W. winds; we only experienced the southern margin of the severe thunderstorm in London on the 11th; the grass in gardens and the fields has been much more burnt by the sun than I have observed it here before; the shade max. was above 80° on 10 days, above 90° on three days, and was under 70° only on three days.—*Strathfield Turgiss.* First part of month very warm, dry, and still; ground parched, clover shrivelled for want of rain, enormous cracks in meadow from dryness of the soil, by the 12th the wells were beginning to fail, by the end of the month the cracks in the meadows sufficiently wide for small birds to fall in and be unable to get out, and the river very low.

IV.—*Sheering.* Total fall 1·81; average 10 years 1864 to 1873 = 1·25; difference in 1874 −0·14; rainfall January to July 9·91; average 10 years 13·95; difference −4·04.—*Ipswich.* Exceedingly dry in this part of the county.—*Diss.* A month of splendid weather and high temperature; but the drought has been much felt, and water in the neighbouring villages has been very scarce; the hay crop was well got up, but very light, and harvest began unusually early (23rd); the rains and thunderstorms after that date greatly improved the appearance of gardens and fields; the early fruits and vegetables (strawberries, gooseberries, and peas) generally failed for want of rain, and the

potatoes are very small, but at present not diseased; wheat and barley look well and full eared; root crops poor, but greatly improved by the last 10 days of the month; harvest work was active to the end of the month.— *Sprowston.* A warm, dry month till the 19th, with the exception of a nice shower on the 11th; a succession of thunderstorms from the 20th to the 25th; corn on light lands much affected by the three weeks drought; turnips, too, are backward and thin.

V. *Compton Bassett.* This month is notable for continuous dry weather, north-westerly winds, much sunshine, great heat during the day, but considerable depression of temperature at times in the night; the wheat crop is good, but other crops are seriously deficient; pastures are burned up, and turnips a complete failure; water has become so scarce that it has to be carted from a distance for the use of sheep and cattle.—*Falmouth.* Generally fine, harvest prospects good.

VI.—*Sansaw Hall.* Almost all trees and shrubs transplanted since September are dying or dead, many forest trees are dying likewise, lilacs and laburnums are suffering much; the only exceptions to the list of killed transplanted trees or shrubs are those which are kept alive by laborious watering; pits and pools, the bottoms of which have not been seen within recollection, are now empty; the fearful drought of this year will be apparent by comparison with the seven months of three previous years :—

			Diff.
1874 =	8·84		
1871 =	14·52	... ...	5·68
1872 =	25·52	... ...	16·68
1873 =	14·10	... ...	5·27

VII.—*Coston.* Another very dry month until the 21st; vegetation much injured by drought; meadows and lawns parched; springs in some places failing; a visible improvement by the 23rd, though scarcely 0·30 of rain had fallen.—*Partney.* I sincerely hope that this (0·32) may be the minimum of all the reports of rainfall for the month of July; the ground is so parched and dry, that I question whether any rain has penetrated to the extreme roots of the grass since February; the crops of wheat are generally good here.—*Branston.* From May 25th to July 20th, there only fell ·77 in.; from lack of winter rains, the wells were low and water-courses dry: while the great heat of the 10th and 11th burnt off the foliage of the raspberries, as if with hot iron; the heat continued to the 20th, when it reached 94°, on the 21st there seemed hope of a change, and on the 24th the long looked-for rain fell.—*Mansfield.* This month has been notable for

many bright, cloudless days, with hot sun; mean temp. at 8.30 a.m., was 64°·9; rain on every day from 21st to 31st, inclusive, but the 30th.

X.—*Woodlands, Elterwater.* A warm month, one of its peculiarities being the total absence of thunderstorms, though very distant thunder has been heard; on 17 days in this month, the ther. has registered in the shade a temperature of 70° or upwards, and four times 80° and upwards.—*Measandbecks.* Former part of the month dry, afterwards frequent thunder, with occasional heavy showers.

XI.—*Llanfrechfa.* Rainfall 1·08, being 1·93 below the average of the previous nine years; no rain between the 3rd and 20th; on the 12th the air felt fresh, as if there had been storms somewhere.—*Dingestow.* Very hot and dry.—*Castle Malgwyn.* The weather has not been so warm as usual, nevertheless crops have improved very much, wheat will be excellent, also the potato crop, turnips are very backward and light.

XII.—*Melrose.* On the whole a fine warm month, ther. registered from 70° to 80° in the shade on 19 days.

XV.—*Quinish, Isle of Mull.* Heavy rain, with strong winds in the beginning of the month, thereafter, fine, warm weather with a good many thundershowers.

XVI.—*Innerhadden.* The weather has been all that could be desired for all farm work; crops of all kinds in excellent condition in this locality; the grouse are likely to be a failure on some of our best moors; fishing on Loch Rannoch has been very good.

XVII.—*Mulben.* July has been a favourable month for the agriculturalist, crops of all kinds are looking well.—*Nairn.* Great heat, with much thunder in the neighbourhood; but (as usual) little in the town of Nairn.

XVIII.—*Strathconan.* Country looking beautifully fresh, at the beginning of the month, good hay weather in the middle, rather windy and dull towards the end.—*Dublin.* The month was remarkably dry till the 20th, when showers set in, and continued to the end of the month, with the exception of the 25th, when heavy continuous rain fell, during a southerly gale, in the afternoon.

AUGUST.

I.—*Winchmore Hill.* Frost occurred on the grass on five nights; on the 24th the min. temp. was 24°, and it was below 40° on 14 nights; the rainfall of the month was entirely produced by thunder

showers; the long-continued drought is being seriously felt in this neighbourhood, trees and shrubs are dying in large numbers, and many are as bare as they are in November, and most of the wells are dry.

II.—*Forest Hill.* The first half of the month was wet, the latter half dry, except the last few days; the bar. was low and unsteady till the 15th, during the next week it was high, with N.E. winds; the days, but more especially the nights, have been cold for the season, there were only three days on which the temperature in the shade rose to 80°. —*Hailsham.* Pastures completely dried up; great want of food for sheep and cattle.—*Andover.* The air has been at times particularly clear and balmy; thunder clouds have been very common throughout the month, and heavy thunder showers made up most of the rain in the earlier part, but only once have we actually had thunder; the long drought (from 14th to 27th) has given every appearance of coming autumn.—*Strathfield Turgiss.* Corn crops generally carted in good condition; wheat above an average crop; root crops worse than they have been for years; food for flocks scarce; water in the wells very low about the third week; rain on the last five days of the month, by which the country was much refreshed, and the beans could then be carried, which hitherto had been so dry that they fell out of the shucks on being handled.

IV.—*Ipswich.* Still very, very dry.—*Diss.* A month of splendid harvest weather, and a large crop of cereals well got up; root crop wanting water; no potatoe disease; in the garden the pears, apples, and plum crops are good, especially the plums which are very abundant; the health of the neighbourhood has been tolerably good, summer diarrhæa (and that not of a severe nature) being the only epidemic; the want of water, however, is severely felt in the neighbouring villages, and its scarcity, together with defective drainage, has caused the air of our town to become most offensive, our small river being nearly stagnant, and the water black, filthy, and polluted; it will be strange if we do not suffer from this state of things, during the coming autumn and winter.—*Sprowston.* Rainfall nearly an inch below the average, but from 4th to 16th more or less fell nearly every day, which hindered harvest work considerably; after the latter date there were 10 days of fine weather; temperature under the average, and very few thunderstorms.

V.—*Compton Bassett.* Until the 13th the weather was showery, then bright and sunny days till the 27th (there being no rain during that time): the temperature low, and but little dew during the nights;

rain fell frequently on the latter five days, but no thunder was heard throughout the month.—*Burnham.* Night temperature very variable, the lowest being 31°.

VII.—*Coston, Melton.* Harvest forward and nearly all got in at the end of the month; rather delayed by the rain of the last six days. —*Bucknall.* Excessive heat on 19th and 20th, and rime frost on 24th.

VIII.—*Walton-on-the-Hill.* From 8th to 19th unsettled weather, almost incessant rain; from 19th to 26th weather remarkably calm, fine clear sky, and high temperature.

X.—*Woodlands, Elterwater.* An extremely wet month (15·23), in fact the wettest that has occurred here since January, 1873.—*Shap.* This has been one of the wettest months (except January); much of the rain fell at night, accompanied by thunder and lightning; most of the wind blew in the daytime; there were 10 days (18th to 27th) without any rain, which greatly facilitated the cutting of the "abundant harvest;" in the north of England, much of the corn is still unhoused, as the rain began to fall at the end of the month in large quantities, causing a great flood and doing much damage to the crops.

XI.—*Llanfrechfa.* Wheat ripe before oats and barley; harvest three weeks earlier than usual.—*Castle Malgwyn.* The weather throughout, except from 15th to 24th, has been rather wet, and not favourable for the harvest; cold nights on and about the 22nd, when the ther., although under the shade of a tree, which would make a difference of two or three degrees, fell to 35°.—*Heyope.* About the 18th to 21st swarms of flying ants and common ants were observed, and in such numbers as to render it almost impossible to tread without killing them.

XII.—*Melrose.* The month, on the whole, has been rather unsettled, with frequent thunder and rainbows.

XVII.—*Leochel Cushnie.* 9·64, the highest fall here in any month for 15 years.

XXI.—*Dublin, Eccles Street.* The month was showery till the 18th, when fine bright weather set in till the 24th, when the weather again became unsettled, and so continued till the end of the month.

XXII.—*Ballinasloe.* With exception of the last four days of the month, the weather was tolerably settled and promising for the crops, both the bar. and ther. being pretty steady.

XXIII.—*Ballyshannon.* The wettest and hottest month; total fall, 5·51.

SEPTEMBER.

I.—*Harrow.* On the whole a fine month, with several splendid days and a higher temp.—*Muswell Hill.* The fall this month must exceed the average, and is the most in one month this year; but one-third of the total fall (3·23) fell on the night of the 30th.

II.—*Bromley.* Nothing remarkable but the high temp. on three or four days in the last week; in September, 1872, the max. was 77°, but that was on the 3rd, this year it was 75° on 26th.—*Forest Hill.* The first 11 days were wet, after which it was pretty dry to the end of the month; it has been the wettest month this year, and the rainfall on the 30th, ·82, the heaviest fall in the year; the shade max. on the 26th, 80°·8, is the highest I have observed so late in the year. —*Strathfield.* Wells 40 ft. deep were quite dry at the beginning of the month, and continued so till after the 13th, though nearly 3 in. of rain had fallen.

IV.—*Sheering.* The fall during the month ·09 below the average (10 years).—*Diss.* An excellent harvest and well completed; a farmer told me that a barn of his, which is filled with the produce of 10 acres of barley, had held the produce of 18 acres last year; the heavy rain on the 3rd (1·40), came in time to save the root crops, which from the drought up to that time seemed likely to fail altogether, they are now looking well; apples and pears are in great abundance; there has been no potato disease, but the later crop has partially failed, owing to the growth of tubers in the ground; plums are plentiful, and wall fruit has ripened better than usual; our town air has been much sweetened by the plentiful rainfall and we have no prevailing epidemic at present.—*West Tofts.* This, 3·04, is the greatest fall in any one month that I have registered since December, 1872.

V.—*Compton Bassett.* During the first 11 days rain fell daily, more or less, amounting to 3·41 in.; from the 12th to the end, beautiful bright sunny weather, with occasional thunder showers (that on the 30th being ·61), the total fall during this time was 1·37, making a total for the month of 4·78 in.; from the copious rain of this month, vegetation has fairly recovered from the effects of the past drought, but the potato crop is half diseased.—*Langtree Wick, Great Torrington.* The first half of the month was very wet, 4·28 in. of rain having fallen during the first 11 days; towards the end of the month there were a few hot days; more rain fell during this month than in any month this year.

VI.—*Brereton.* The rainfall of this month (3·19), exceeds that of September, 1873, by ·46 inches.

VII.—*Coston.* The first month this year in which the rainfall has exceeded that of the corresponding month of last year.—*Mansfield.* The general aspect of the month dull, exceptionally dull for Mansfield, noted for its fine autumns; though many (23) rainy days have occurred, the fall is but slight; the latter part of the month has been finer than the former, the days pleasanter and the sun brighter.

X.—*Measandbecks.* Heavy showers at times during the first fortnight; thunderstorm on 21st, afterwards showery, but more seasonable. —*Shap.* Considering the quantity of rain that has fallen, mostly in the early part of the day, September has been a warm mild month; harvest has all been gathered in; potato crops are good in Westmoreland; thunder has been heard and lightning seen, but at a great distance.

XI.—*Llanfrechfa.* The harvest having been well housed in August, wheat sowing is in progress this month, which is very unusual in this neighbourhood.—*Castle Malgwyn.* We have had 14 fine days, but all the others have been exceedingly wet and unfavourable for the gathering in of the crops, and owing to so much rain, the potato crop, though good, is suffering much from disease.

XII.—*Melrose.* Although more than 2 in. of rain have fallen during the month, it has, on the whole, been favourable for the ingathering of the grain crops.

XV.- *Quinish, Isle of Mull.* This (11·23) is the heaviest rainfall in one month that I have known since I began observing; there have not been any remarkable gales, though much rough weather, and the rain has been almost incessant.

XVI.—*Innerhadden.* The weather has been very trying to sportsmen, fishers, and farmers; the 19th and 21st were the only days on which crops were secured; potato disease is slight, and no cattle disease in this neigbourhood.

XXIII.—*Ramelton* Unfortunate weather for the harvest; the heavy rain from 19th to 22nd causing floods, which carried off the stooks of corn in the low-lying districts.

OCTOBER.

I.—*Harrow.* A wet but mild month, average temp. being 5° above that of last October; martins and swallows remained late.—

Muswell Hill. Chiefly noticeable as the wettest month this year, having exceeded September by ·37; the deficient rainfall in the spring and summer months has been somewhat compensated by the excess of September and October; it is curious to remark that the aggregate fall of these last two months exceeds the total of February, March, April, May, July and August, by about half an inch (·52) the fall in the six months being 6·31 against 6·83, for September and October; at no time during the month have there been three consecutive days without rain, though in many cases the falls were very small.

II.—*Forest Hill.* The wettest month since December, 1872; the warmest October I have ever registered, and the only one on which the temperature did not go below 32°; the winds were mostly south-westerly blowing gales on the 2nd and 6th, and a heavy W.S.W. gale on the 21st.

III.—*Addington.* A dull month; although, the lowest temp. in shade was 32°·0 on 23rd, the grass has frequently been white and crisp, and men mowing early in the morning have had their scythes covered with ice.

IV.—*Diss.* A pleasant month, favorable for agricultural and gardening operations; beet and turnip crops fair on the heavier lands pears and apples fine, and in great abundance; no prevailing epidemic. —*Sprowston.* A dry month, not one half of the usual amount of rainfall recorded; the gale from W.S.W. and W. on the 20th and 21st was very severe and did great damage to stacks and trees in exposed places.

V.—*Compton Bassett.* Rain has fallen on 22 days, and the weather has been mild.—*Falmouth.* A great part of the month was more like April than October.

VI.—*Sansaw Hall.* A very warm month with very high winds; on one night (20th and 21st) terrific gale, when much damage was done everywhere; the last 10 days were exceedingly damp, the air being saturated, and generally extremely unhealthy; I am informed by medical men that no one with rheumatic tendency has escaped.—*Brereton.* The rainfall has exceeded that of last year by ·06; the nights have been cold; a sharp frost occurred on 23rd, when the min. on the grass was 25°.

VII.—*Coston.* Prevailing winds S. and S.W., shifting to N.E. on the 28th, from the 24th to the 31st very dull and wet though there was no heavy fall except on the 29th.—*Mansfield.* The general aspect of the month has been gloomy and showery, the sun having seldom made its appearance, the prevailing winds were from S.W. to S.E., till the

latter part of the month, when they changed to N., but still bringing rain.

VIII.—*Walton-on-the-Hill.* A very wet and stormy month, with almost incessant rain.

X.—*Easedale.* A very wet month, but fine at the end.—*Mardale.* Rain has fallen more or less nearly every day in the past month.—*Measandbecks.* Heavy rains and high winds during most of the month.—*Shap.* Thunder, lightning, wind, and heavy rain have been frequent during the month, total fall 14·82.

XI.—*Castle Malgwyn.* The weather during the month has been very wet and stormy, the temperature low; but there has been very little frost.

XII.—*Melrose.* The weather throughout the month has been generally adverse; heavy rain alternating with slight frosts and high winds.

XIV.—*Holehouse.* A very wet backward month for farm operations; harvest in our upland districts was only finished about the 22nd; temperature only three times at the freezing point.

XV.—*Quinish, Isle of Mull.* With the exception of the 13th, every day from 1st to 24th was rainy, and very frequently with high winds; the fall of rain in this and the preceding month has been greater than known here for many years.

XVI.—*Cambo.* During the month the changes in the bar. have been great and rapid, highest 30·30, lowest 28·50, greatest fall in 12 hours 1·05, greatest rise in succeeeding 12 hours 0·80; the country is very dry, the ground turns up under the plough like ashes.—*Innerhadden.* Very heavy floods in the river Tummel, and great loss by the lands being under water; potato crops are at present very poor owing to the rain, the hay in many place is not yet secured; but all corn is stacked in good condition; this month has been a most unfortunate one for farmers and sportsmen; the grouse is a "*rara avis in terris*" in these parts; white hare shooting is the only sport in the district at present.

XXIII.—*Ramelton.* The fine calm weather, after the 23rd, is spoken of here as the "Donegal Summer," but I expect it was general over the country.

NOVEMBER.

I.—*Muswell Hill.* The first half of the month dry, in fact more than two-thirds (1·42) of the total fell during the last three days of the month, thus bringing the aggregate up to something above the average.

II.—*Bromley.* A variable month, with dense fogs at the end, and a gale of wind and heavy rain (1·17) on 28th; total rainfall of the month 3·15 in., of which 2·41 fell between 9 a.m. on 27th and 9 a.m. 30th.—*Forest Hill.* The month was rather dry and the daily fall of rain small till the last three days, which were very wet and stormy; there was much fog from the 21st to 24th, and the period from 21st to the 28th was very cold; the barometric range was large; there was a rapid decrease of pressure on the 28th and 29th.—*Hailsham.* The first half of the month beautifully dry, only ·18 in. of rain having fallen before the 15th; dry, cold seasonable weather from 18th to 28th, when there was high wind and heavy rain.

IV.—*Sheering.* Total fall 0·30 above the average 1864-73; the total fall for the 11 months 3·36 in. less than the average for the same period.—*Ipswich.* The first 10 days beautifully fine, the second 10 rain every day but one, then seven days without rain, and the last three days very wet, with rapid fall of bar. on 28th and 29th.—*Sprowston.* Total fall for the month 2·61 in., about a ¼ in. above the average, but more than an inch of it fell during the last two or three days; very little fog or frost, but a strong gale on the evening of the 29th; the temp. has been above the average; the springs are still very low.

V.—*Compton Bassett.* The first three weeks have been very favourable for out-door work of all kinds, only drizzling rain having fallen on nine days, and a little snow on one, with rather keen frost on some mornings; from the 24th to 30th rain fell every day, and on 29th strong gale from N.W.—*Zeal Monachorum.* A good cider year; apples ripe early, and a large quantity on the trees.—*Taunton.* Last week stormy and boisterous, but, on the whole, it has been a very mild month.

VI.—*Brereton.* The month has been very much colder than the corresponding month of last year; frost on the grass on 16 days.

VII.—*Coston.* The first part of the month very mild; crocuses and snowdrops coming up; lilac, horsechesnut, ribes, and other trees pushing their buds; the latter part of the month quite the reverse, quite wintry, snow lying on the ground for three days, the roads almost impassable from their slippery state; on the 26th and 27th it froze all day in the shade; in consequence the mean temp. of the month was more than 2° lower than that of November, 1873.—*Bucknall.* Mean temp. 40°·4, being 2°·7 below the average; several frosty nights after the 10th.—*Mansfield.* Until the 12th the days were very beautiful, bright and sunny, a little wind with occasional showers at night,

from the 12th to the 20th dull and damp, with cold nights and showers; afterwards cold, raw wintry weather.

IX.—*Stanley.* The month has been unusually severe, and the mean temp. has been 3°·1 below the average.

X.—*Birkside.* Gauge covered with snow and I cannot get to it to measure it; we have had a thick snow. [This gauge was inaccessible until January 4th, 1875.—Ed.]—*Gowbarrow.* Hay scarce and very hard to get at.—*Woodlands, Elterwater.* Prevailing wind on 15 days, N.,N.E. and N.W.; the mean temp. a trifle above the average of the last few years; great range of the bar.—*Easedale.* Frost and snow.—*Measandbecks.* First fortnight cold and generally dry, then frost, with showers of hail and snow to the end of the month.

XI.—*Castle Malgwyn.* Generally wet, occasionally stormy and mild.

DECEMBER.

I.—*Harrow.* The month has been a very little colder than December, 1870, and January, 1871.—*Muswell Hill.* The fall of rain for the month is somewhat above the average.

II.—*Tunbridge.* A very severe month, the mean temp. being only 32°·7, or 4° below the average, and little more than half a degree above freezing point; the nights average 5° below it. —*Forest Hill.* Great oscillation in the bar. till the 18th. The month has been very cold, especially after the 9th, the mean. temp. being lower than in any month since I have observed here (since October, 1870) except January, 1871. The number of frosty nights (26) is more than I have ever recorded in any month.

III.—*Addington.* This has been a dull, sunless month, fogs have been frequent, each of the frosts having been accompanied by a dense fog. On the 23rd and 31st the trees were beautifully covered with hoar frost.

IV.—*Sheering Rectory.* Mean. temp. of the month 31°·9, being 6°·6 below the average of the last 14 years.—*Diss.* The first half of the month windy, wet, and disagreeable, the latter half intensely cold, the temp. seldom rising during the day more than 2° above the freezing point.—*Sprowston.* Rainfall about half an inch above the average; a very cold month, the ther. registering on the 29th 5°; the rime frost continued on the trees from the 28th to the 1st of January, notwithstanding a very bright sun; as usual these very severe days were perfectly calm; dead blackbirds were picked up in all directions.

V.—*Compton Bassett.* The early part of the month dull and cold,

but dry, then rain, snow, and white frosts to the 14th, when snow fell heavily; from 16th sharp frosts occurred every night, with snow lying on the ground till the end of the month.—*Falmouth.* No snow in this district, but plenty of rain, and cutting (though not frosty) winds.—*Taunton.* A very cold month, and very variable weather.

VI.—*Brereton, Leamington.* Very cold month; frost in the shade almost daily from the 10th to the end, the ther. fell below 30° on every day but two, and on seven days it fell below 20°.

VII.—*Coston.* A very severe month, temperature very low during the latter half of it; snow on the ground, no grass or road visible from the 11th to the 31st inclusive; frequent fogs and consequent heavy rime on the trees, and many blackbirds and robins killed by the cold; fieldfares numerous at the beginning of the month, but none to be seen at the end of it.—*Bucknall.* Continued frost and snow after the 9th.—*Mansfield.* The month of December was noted for the low temp. reached, and for the snowfall; the month was as usual till the 9th, when nearly 3 in. of snow fell; this soon disappeared under the rain which followed; on the 15th and 16th snow again fell, it was followed by frost which continued increasing in severity, with calm bright days and foggy nights, till the end of the month; the low temps. were 15° on 22nd, 16° on 23rd and 25th, 7° on 29th and 30th, and 5°·5 on 31st.

IX.—*Stanley.* Mean temp. of the month rather more than 9° below the average, min. temp. 8° (and 5° on grass) on 29th; the ground having been covered with snow for more than two weeks the small birds are suffering dreadfully from cold and hunger.—*Middlesborough.* Snow fell through the month and lay very deep all round here, the traffic on the railways from here was stopped by the snow lying so deep on the rails; temp. on 28th 14°, 29th 10°, 30th 16°, 31st 14°, and then gave way to a thaw.

X.—*Woodlands Elterwater.* The mean. temp. has been very low, more severe than in many parts; there have been many falls of snow, which has been covering the ground nearly all the month; N. and E. winds very prevalent from the 20th to the end of the month, with the exception of the 24th and 26th, the weather was very bright, the sky being nearly cloudless.—*Shap.* The ground so covered with snow that farm work is suspended, except that of leading manure on to the meadows; all the ponds and rivers are ice bound.—*Kirkstone Pass.* All through December there has been nothing but storm, all has been one uniform level of snow for weeks, so that nothing could

pass; in many places the snow was 8 feet deep in the roads, the snow was level with the top of the house at the south end; as near as I could guess, the snow fall during this month would be at least 30 inches, many people say they never saw so much on Kirkstone Pass these last 40 years, the greatest fall was on the 16th and 17th, but it scarcely ceased till the 25th.

XI.—*Dingestow.* More frost and skating than remembered.—*Castle Malgwyn.* The weather during the month has been very variable, and generally stormy; I have not seen so much snow here for many years—*Trevalyn.* Mean temp. at 4 feet was 10° on the 18th; this month was very cold, the mean of the month being only 33°; the number of nights at or below 32° was 22; it was the coldest month since January, 1871.

XII.—*Melrose.* The month has been stormy throughout, with heavy falls of snow and severe frosts, the ther. registering 5° on the 29th and 30th; the total fall of snow amounted to a depth of 34 in.

XVII.—*Keith.* The snow which fell between the 12th and 31st of December for a time blocked up the railway, being in some cases 20ft. deep in the cuttings, and with the greatest exertion both night and day of thousands of men, we only got the traffic resumed on the evening of the 3rd of January, and some sections not till the 4th.—*Nairn.* Severe frosts, especially during the last week, with occasional falls of snow; sky generally clear, and none of the fogs which appear to have been frequent in other parts; max. temp. 50° on the 4th, min. temp. 15° on the 31st; 28 days on which it was at or below 32°.

XVIII.—*Dingwall.* The first ten days and the last ten days frosty. —*Springfield, Tain.* The frost continued all through the month.—*Sligachan.* Very little rain, but snow covered the ground all the month with hard frost.—*Dava.* Frequent snow all through the month. —*Bernera Cottage.* We have not had such severe frost as in the month of December for 20 years, the heaviest carriage might be driven over our fresh water lochs during the frost; old folks say that they expect a fine spring to follow.

OBSERVERS' NOTES ON THE YEAR 1874.

ENGLAND.

DIVISION I.—MIDDLESEX.

TEDDINGTON.—The total fall (21·29) is about 3 in. below our average.

MUSWELL HILL, 1874.—The aggregate fall of rain (21·22 in.) is considerably less than what may be considered as an average for this locality. The chief feature worthy of notice is the unequal distribution of the rain during the year, the total of the first eight months being less than that of the last four, thus :—

January	1·46	September	3·23
February..	1·16	October	3·60
March	·67	November	2·11
April	1·43	December	2·09
May.....	·71		
June.....	2·42		11·03
July.....	·88		
August.....	1·46		10·19
	10·19	Difference....	·84

Showing an excess of more than three-fourths of an inch of the last four over the first eight months. Though the total of 1874 is about 3·50 in. less that that of 1873, the number of days (176) on which rain fell in 1874 is greater that that of 1873 by 4, whilst the total of the greatest falls in 24 hours for each month for 1874 amounts to only 6·31 against 7·89 for 1873, the two facts tending to prove that there has been rather an excess of *small* falls of rain, and a deficiency of *heavy* falls in 1874.

DIVISION II.—SOUTH EASTERN COUNTIES.

LINTON PARK.—As doubtless some of your readers may be interested in knowing which is the driest and which is the wettest month of the year, I herewith give you the mean rainfall of the past 20 years at this place as taken by one instrument and in one position, by which it will be seen that the common saying of "February fill dyke," and "April, copious showers," are not verified by the result, but on the contrary,

found to be erroneous; the relative position of the months, beginning with the wettest and ending with the driest, being thus, and also the average amount of rainfall.

	Rain in inches.
October	2·967
September	2·714
December	2·464
November	2·451
January	2·378
May	2·151
June	2·122
August	2·057
July	2·044
March	1·937
February	1·564
April	1·542
Which gives a yearly average of	26·391

The average number of rainy days being 165, and the average number of frosty days being 83.

From the above table it will be seen that nearly twice the rain falls in October, that falls in April at this place, and it might be worth while enquiring if the respective months hold the same position elsewhere. I am aware that a longer period than 20 years ought to be gone into to declare a definite conclusion, but very often averages are taken at less periods; but, to those who are apprehensive that our yearly rainfall is diminishing, I may add that the register from which the above is taken represents quite a contrary state of things, for dividing the 20 years alluded to, into periods of five years each, I find the averages to be thus—

	in.	No. of rainy days.
Average yearly rainfall from 1855 to 1859, both included	23·77	147
,, ,, ,, 1860 to 1864, ,,	25·72	179
,, ,, ,, 1865 to 1869, ,,	29·40	165
,, ,, ,, 1870 to 1874, ,,	26·68	169

The wettest year during the above period being 1872, and the driest one 1858; there being 14 years wetter than the past one (1874), and five drier, viz:—1855, 1858, 1863, 1864, and 1870.

Forest Hill.—The first five months very dry, but the autumnal rains were copious, the total rainfall (21·39) is less than any of the last few years. Some snow fell in March, and much in December. Most of the summer thunderstorms passed to the N. of this place, so that we escaped their severity. A few heavy westerly gales in the autumn, alternating with fogs. The max. bar. corrected was 30·73 on 6th March, the min. 28·63 on December 9th and 11th. Adopted mean temp. of year 49°·5, dew point 43°·2, relative humidity 79, the shade

temp. rose to, or above 80° on 18 days, and fell to 32° on 63 nights in the air, and on 115 nights on grass, the latest frost on grass in spring was 27°·0 on June 13th, the first in autumn 31°·9 on October 6th.

West Dean.— Mean rainfall 1845 to 1874, 35·11, the fall this year being 31·53 is 3·58 below the average.

Shillinglee Park.—The fall of 1874 is ·08 below the average of the last eight years.

Forest Lodge, Maresfield.—The rain which has fallen in 1874 (29·17) is 1·87 below the average of the preceding 18 years. May was a very dry month, and comparatively little rain fell in March and July; ·01 or upwards was registered on 186 days against 189 in 1873. Lightning, with or without thunder, was seen on 20 days, five being in July, four in September, and three in October.

Chapel Hill, Basingstoke.—Total fall (24·53) 2·35 below the average, 1869 to 1874, 53 per cent. fell during the last four months. On three days the fall exceeded 1 in.; the heaviest fall being 1·19 on 28th of November.

Round Oak, Newbury.—Total fall (22·92) 5 in. below the average, 1866 to 1874, inclusive.

DIVISION III.—SOUTH MIDLAND COUNTIES.

Fields Weir.—Total fall (20·20) 5·13 below the average, 1851 to 1873, inclusive.

Berkhempstead.—The total fall (25·24) was 2·54 less than that of 1873, 13·73 in. below that of 1872, and nearly the same as 1870 and 1871.

Broughton Lodge.—Total fall (25·10) is 1·91 in. below the average, 1868 to 1873.

Bedford.—Though less rain fell in the early months of 1870 than in the corresponding months of the past year, the soil was more destitute of moisture in the past summer months, owing partly to the differing powers of evaporation and to the greater moisture in the earth on the advent of 1870. Heavy clays, however, did not crack and fissure so much by the drought. When the greatest drought prevailed, the moisture in medium and mixed soils was reduced to 6 and 7 per cent. only. Harvest began generally on Monday, 27th July.

Abington Pigotts.—The fall (18·52 in.) was 3·56 below the average of the 10 years, and it fell on 3 days less than usual, the mean temp. of the year 48·3 being 0°·3 below the average. Frosty nights in air and on grass 100 and 138 respectively, the lowest temp. I recorded

was −2°·0 on 29th and 30th December. The mean velocity of the wind, by a Robinson's anemometer read daily at 9 a.m., was 14·3 miles per hour. The rainfall was below the average every month to August, inclusive.

WISBECH.—The total fall (19·45) is about 4½ in. below the average of 14 years, in which period the years of least rainfall have been 1863 19·36, 1864 15·99, 1870 20·48, 1874 19·45.

DIVISION IV.—EASTERN COUNTIES.

WALTHAMSTOW.—A rather peculiar feature has been noticed in 1874, viz. :—a paucity of rain about the 18th, 19th, 20th, and 21st of the months, from March to September, inclusive, thus on the 18th in those months 0·03 only was collected, on the 19th 0·01, on the 20th 0·08, and on the 21st 0·08, the following are the quantities collected on those days during the four years of registration—

Total quantity.		Mean yearly fall		Mean daily fall.
18th, 3·575	.....	0·894	.....	0·074
19th, 1·870	.....	0·467	.....	0·039
20th, 1·625	.....	0·406	.....	0·034
21st, 2·220	.....	0·555	.....	0·046

From these numbers it appears that less rain has fallen on the 20th of each month during the past year, than on the days preceding or succeeding it.

WIX, MANNINGTREE.—A remarkably dry season. The subsoil at the end of the year was so dry and hard, that even where it consisted of clay, a pick had to be used in opening trenches for laying drains.

AUDLEY END.—Commencement of the year very mild, which brought vegetation forward, only to be cut off by the late spring frosts, which were frequent, even into June; very deficient rainfall, especially in the spring and summer months. Snow and sharp frosts all through December; yearly mean bar. (corrected) 29·98, max. 30·75 on 6th of March; mean daily temp. 48°·0, mean temp. of the earth at 6 in. deep 48°·9, at 12 in. deep 50°·8; these results are from thermometers plunged in light garden soil.

GRUNDISBURGH.—From the monthly amounts you would not think we should have suffered so much as we did from drought, but from May 15th to July 22nd, a period of 69 days, we had only 1·57 of rain, which will account for the way our crops suffered. Nine of the days in July the max. temp. was above 80°, and on one day it was 87°.

ASHBOCKING VICARAGE, NEEDHAM MARKET.—The return of the rainfall for 1874, is that of a remarkable year of drought here; the parish was literally like Israel in the wilderness without a smitten rock. Our ponds were dry in the spring, but water carts happily supplied a portion of our need. The year was, however, most markedly a healthy one; we had no illness among our 320 people.

BURY ST. EDMUNDS.—Very dry summer; wells and ditches dry, a more than usual absence of good daily rainfall or heavy storms; only one day on which an inch or more fell, and when the rain fell it was generally as a slight drizzle.

WETHERDEN RECTORY.—Remarkable coincidence all through this year with 1870. The totals being 1870 16·40, 1874 16·61. November and December in each year, together, gave nearly the same amount, but in different proportions. The min. temp. in 1870 was 9° on the night of December the 24th, in 1874 it was 8° on the 29th of December.

WESTLEY.—The first six months being very dry accounts for the very bad crop of barley.

WALSHAM-LE-WILLOWS.—Great scarcity of water in the wells of this neighbourhood during the whole summer and greater part of the autumn. In some the water is still low.

DISS.—The year 1874 has been a very pleasant one: the hay crops were good, and the harvest was plentiful; the wheat in many places was an exceedingly heavy crop, and the roots, which at one time threatened to fail for want of rain, were restored by the September falls and turned out well. In gardens, the peas and strawberries failed from drought; but apples and pears were plentiful, potatoes free from disease, plums in abundance, and wall-fruit fair in places, but not generally good. There has been no severe prevailing epidemic, except such as could be attributed to local causes. The want of water seriously felt from April to October.

GELDESTON.—In none of the first three months did 1·00 fall, so that taking these and the last two months of 1873, only 3·94 fell during the five months, the average being about 11·38. The total fall of the year (21·00) is 2·40 below the average of the last nine years.

REEPHAM.—The snow in this parish has been light, probably never over 3 in. on the level; on the 30th of December, in the afternoon, I am told a heavy storm fell six miles west of this, but scarcely a flake fell here, the returns of rainfall will therefore probably vary very much.

DIVISION V.—SOUTH WESTERN COUNTIES.

ORCHESTON, ST. MARY.—The first five months had below the average rainfall, the next three above it; from December, 1873, to August, 1874, the fall was only 13·16, the smallest fall we have ever had in that period. (Observations commenced in October, 1865). Thunderstorms very frequent in the neighbourhood during the summer, but only two reached here, and both were slight.

COMPTON BASSETT.—The year was cold and wet at the beginning. The spring wet, cold and long (with the exception of April, which was unusually warm, especially during the latter part). The summer was remarkable for its extreme drought, the scarcity of water and parching up of turnip crops; but the autumn months brought sufficient rain to restore the browned pastures and several other forms of vegetation.

CHALBURY.—There was a remarkable drought from April 18th to June 23rd, a very critical time for grass and root crops. In those ten weeks, only ·59 in. of rain was measured here. These were succeeded by a few wet days, and then by three more weeks of drought. There was also a rainless fortnight in August.

	1874.	Average (10 years)	Deficiency.
January, February and March	6·04	8·84	—2·80
April, May and June	4·77	5·79	—1·02
July, August and September.....	7·82	8·24	— ·42
October, November and December	11·73	9·97	+1·76
	30·36	32·84	—2·48

BRAMPFORD SPEKE.—The first half of the year very dry; from May 15th to June 22nd, only ·34 of rain fell; from December 1st, 1873, to July 1st, 1874, 7 months, only 12·73, the 9 years' average of those months being 20·21. The autumn was wet, September being 2·83, October 1·87, and December 1·53, above the average, so that the yearly fall was 2·52 above it. Plants and flowers seemed to rest in the dry weather as in winter, and when the rain came anemones and other early flowers bloomed, a fig tree sprouted, strawberries blossomed, as in spring, and ripe fruit was gathered from them in November.

EXE VILLA, TIVERTON.—The greatest number of consecutive dry days was 21, from May 27th to June 16th, greatest number of consecutive wet days was 11, from September 28th to October 8th.

MESHAW.—Amount of rainfall below the average, the number of wet days above it.

LISKEARD.—The rainfall for 1874 was 6 in. above the average.

DIVISION VI.—WEST MIDLAND COUNTIES.

SAUL LODGE.—The chief meteorological peculiarity of the year 1874 was the excessive drought in May, June, and July, the total fall in those months having been only 2·16 in. No rain fell here from the 28th of May to the 24th of June, or 24 consecutive days, the longest period without rain that I have ever recorded (my records extend over 17 years), but notwithstanding this, the rainfall during the year has been nearly equal to the average. The max. bar. was on the 6th of March, 30·84 corrected to sea level. The falls of the bar. have been three only, November 29th, 28·74, December 8th, 28·74, followed by a fearful gale, veering round from S.W. to N., and on December 11th, 28·70. The frost was continuous here during the last 23 days; the lowest temp. was 15° on the 30th of December.

THE GRAIG, ROSS.—The rain for the year slightly below the average. The first two and the last four months were wet, the rest dry. From March 1st to June 23rd (115 days), only 3·18 in. were measured. Very hot from July 7th to 20th. Several frosts in May. Little T or L. Fine harvest weather August 16th to 27th, unsettled and wet afterwards. Corn crops good; but hay, turnips, and spring sown crops mostly failures.

MILL STREET, LUDLOW.—The extraordinary deficiency in the rainfall in the spring and early summer months, so far checked the development of the foliage on some of the oak trees in this neighbourhood, that they only became green late in the summer, and the leaves remained green on them till December, when trees near them were leafless.

TAMWORTH.—The rainfall was about the average, but was very unequally distributed. The first six months, to June 30th, having only had 8·67 (against nearly 15 in. in the other six) caused a most deficient hay crop, and an almost total failure in the turnip crop. Wheat cutting commenced on 31st of July and finished on the 10th of August.

SHUSHION'S MANOR, PENKRIDGE.—The two most striking points are the very small quantity of rain in June (0·59), and the copious fall in November (3·77). This exceeds the fall of November, 1872, by ·86; that of November, 1873, by 2·50; and the average of the three years—1872-3-4, by 1·12. June, 1874, is —3·26, compared with June, 1872; and —2·77 compared with June 1873; and compared with average 1872 to 1874 —2·01.

BARLASTONE, STOKE.—I have completed observations for 10 years, and find the average to be 32·30 in.

Greatest, 1872..... ..... 50·03 in.
Least, 1870..... 23·28 in.

HENLEY-IN-ARDEN.—Wells, springs, and brooks, in this neighbourhood, were many of them, until within the last few weeks, quite dry-which seriously inconvenienced the farmers and others. There is now plenty of water.

STRETTON HOUSE, HINCKLEY.—The average rainfall for the last nine years, taken from my register, is 25·50 in. It can be easily seen why the year just ended should be noted for being a corn year, and 1873 a year of large grass production; the former requires a dry spring and summer, and the latter a wet one. In the two years mentioned, we have had the two extremes. In 1873, 10·90 in. fell during the five months March, April, May, June, and July, hence it may be imagined that it was a grass season *par excellence*. In 1874, in the same five months, only 4·84 fell, which was very unfavourable for the production of grass, and at the same time the main cause of the good yield of corn now being experienced.

DIVISION VII.—NORTH MIDLAND COUNTIES.

PODE HOLE, SPALDING.—The extreme paucity of rain is remarkable. I once thought that I was pretty tolerably certain of our usual rain signs, so as to be able often to indicate the day previous as to what would follow; but I seem to have now lost what faith I had in my rules. However threatening the clouds often seem, and with the barometer also low at the time, it is strange how the clouds lighten off and disperse, and we get no amount of rain. We have sometimes thought, ours being a flat county, and without woods to concentrate moisture, that we had found a reason why our records were often light. But even this argument failed in 1872, when we were deluged by wet, up to January, 1873, when all at once the weather changed, and has so continued to the present.

BRANSTON.—The year has been a dry one, driving farmers and gardeners to their wits' ends. The summer tropical, and hundreds of acres of land absolutely destitute of even a tinge of green. The autumn will be remembered for dry wells and scarcity of water—the winter for its earliness and prolonged intensity. Snow of immense benefit in protecting crops, and as bringing water to replenish the feeble springs. Previous to this, the earth's reservoirs hardly ever—if ever—known to be so low.

WELBECK ABBEY.—The total fall (22·21) was nearly 3 in. below the average, and distributed over the months in no great disparity, April, October, and November, being the wettest months, while March, May, and June, were the driest; and this caused a great failure in the grass, hay, and root crops, from the seeds sown not vegetating well. The winter (1873-4) was very open and mild; but some severe frosts in March, with snow storms and keen nipping winds in April and May, injured the fruit blossoms in some districts and caused a failure in the crops. The summer months were dry and warm, and the crops of wheat and barley were reported above an average—as well as the potato crops.

BABWORTH.—Of the 142 days on which rain fell, there were 53 on which only ·05 or under fell, the rain so falling, quickly evaporated by hot sun, drying wind or the heat of the earth, does little good, and sometimes harm, as it causes the plants to throw out surface roots, which are soon dried up; and it causes seeds to vegetate, which also for lack of moisture dry up. In 1873, there were 49 days with ·05 or less fall, and in 1872 there were only 23, and we had abundant crops.

SPONDON, DERBY.—We suffered severely last summer for want of rain; what did fall in July and August was generally so slight that it did hardly any good.

DIVISION VIII. NORTH WESTERN COUNTIES.

WINNINGTON, NORTHWICH.—Rainfall this year, from February to July, unusually small and below the average.

HINDERTON, NESTON.—The first six months of the year were very dry, and the total of the year was about 9 per cent. below the average. There were five days on which the rainfall exceeded half-an-inch, and forty days on which it reached or exceeded one-fifth of an inch. The number of rainy days was considerably below the average.

WALTON-ON-THE-HILL, LIVERPOOL.—The first six months very dry, and the last six very wet and changeable. The barometer shows a large range for the year, temperature also having varied largely. Rainfall about the average, and 3 in. in excess of last year.

WITHINGTON, MANCHESTER.—The rainfall, 28·57, is curiously less than the rainfall at Manchester as given in the *Meteorological Magazine.* I believe we have much less rain here than falls at an equal distance N.W. of Manchester, this will be seen by comparing returns; as I have two gauges, and they agree within one-tenth, they must be pretty accurate.

BOLTON-LE-MOORS.—Rainfall in 1874 was 5·98 more than in 1873, and 1·54 more than the average of the previous 43 years.

SOUTH SHORE, BLACKPOOL.—Total fall 29·73, is 2·19 below the average (19 years) which is 31·92, the evaporation for the same period being 29·58.

ECCLESTON (ELSWICK LODGE).—The year has been a remarkable one here in some respects; February, March, April, May, and June were very dry, and turnips were a total failure; the hay crop also was very light. The fall of rain in October was very great, 1·90 having fallen in one day. In the same month was the most violent storm that has been experienced here for some years. It was marked, also, by the entire absence of frost, the thermometer never falling below 34°. December, on the contrary, was a very cold month; the temperature having fallen below 32° on every night but three. I make the mean temperature of the month 28°·1 against 35°·9 last year, and 38° the year before. The lowest point at 4 ft. from the ground was 5°, which was reached at 9 p.m. on the 31st, after which time it became gradually warmer and has ended in a complete thaw.

CATON.—The rainfall of the year, 44·05, has been 3·03 above the average (26 years). February, April, May, June, and July, were dry; but there was an excess of 7·50 in the last five months.

STORRS HALL, CARNFORTH.—Total fall 46·58, or 2·68 above the average of 10 years.

ALLITHWAITE.—7·89 in. of rain fell during harvest, August 8th to September 14th; but the crops were secured in first-rate condition.

DIVISION IX. YORKSHIRE.

RICHMOND HILL, SHEFFIELD.—Taking the last two years, I find that about 70 per cent. of our rain falls with the wind between S. and W., while 86 per cent. falls with southerly, and but 14 with northerly winds. In 1873 the wind was easterly on 100 days, and westerly on 202 days. In 1874 easterly on 80 days and westerly on 233 days.

DERRINGHAM, HULL.—Average (24 years) 1850 to 1873 = 21·26; the fall of this year (19·29) is therefore very nearly 2·00 below it.

BEVERLEY.—The oak was in leaf in the middle of May, a cold month, and the ash three weeks later, reversing the usual order.

DIVISION X. NORTHERN COUNTIES.

WEST HENDON HOUSE, SUNDERLAND.—From the end of December,

1872, to the latter part of July, 1874, was very dry. The thickest covering of snow in the winter of 1873-4, was on March 12th, and was 2½ in. deep. The thickest covering in 1874, was on December 30th, and was 8½ in. deep. December was remarkably severe. The night of the 29th was the coldest we have had since January, 1861; the thermometer against the house, 5 ft. from the ground, falling to 7°.

DIVISION XI. MONMOUTH, WALES, AND THE ISLES.

DINGESTOW.—The mildest winter possible, the E. winds and the W. winds dry and not stormy. The whole summer and autumn was characterized by the evenness of the temperature at midnight and morning both for heat and cold, often the thermometer had not risen 1°·5 above the night min. at 8 or 9 a.m. The nights during the summer were especially warm.

TREVALYN HALL, WREXHAM.—First 7 months generally dry, the driest being March and June; there was a remarkably dry period from May 25th to June 23rd, only ·10 falling in the 28 days, the long drought may be said to have terminated about July 21st, although after some very heavy rains there was a very fine and dry period of 11 days, from August 16th to 27th. Rain fell most frequently in October, but the total amount was greatest in November. The average rainfall of the last 7 years is 28·41, but as that includes the extraordinarily wet year 1872, it is probably somewhat higher than the mean of any large number of years would be.

GUERNSEY.—Total fall 35·38 is 0·97 below the average of 30 years, the number of days is 6 above the average.

SCOTLAND.

DIVISION XII. SOUTHERN COUNTIES.

NEW GALLOWAY.—Of the 45·59 in. of rainfall recorded in 1874, 21·06 fell between midnight and 9 a.m, and 24·53 in. between 9 a.m. and midnight, otherwise, about seven-fifteenths of the total fall fell in the first nine hours of the 24.

DIVISION XIII. SOUTH-EASTERN COUNTIES.

MILLFIELD, HADDINGTON.—We had very little snow in this neighbourhood.

DIVISION XV. WEST MIDLAND COUNTIES.

INVERARY CASTLE.—This year has been distinguished by an unusual fall of rain, which fell chiefly in March, September, October, and November. Our crops, such as hay, corn, and potatoes, promised well, but they were mostly lost from the continuous rainfall; nothing like what we had is remembered by the oldest inhabitant. How different it has been in England.

AIRDS.—Very heavy rainfall marked the autumn months, August, September, and October, showing a united fall of twenty-seven inches and seven-tenths! in no year since 1855 have we had anything like so much even in the winter months.

DIVISION XVI. EAST MIDLAND COUNTIES.

LENY, CALLANDER.—My figures show me an average rainfall here of 64 in. in the year, so that the past one is largely in excess of the average—resulting chiefly from the fall in the months of August, September, and October.

DIVISION XVII. NORTH EASTERN COUNTIES.

FETTERCAIRN.—It may be worthy of remark that about one-seventh of the total fall of the year (30·99) fell on 6 consecutive days in August, thus 9th and 10th 1·14, 11th ·30, 12th ·30, 13th 1·63, and 14th 1·07, total 4·44.

ARNHALL.—Wind from N. 77 days, S. 17, E. 76, W. 195.

LEOCHEL CUSHNIE.—The autumn mild, and fine till December, which has been very stormy.

IRELAND.

DIVISION XX. MUNSTER.

GLENAM, CLONMEL. — Fine dry summer, few days of extreme heat. Apples and potatoes good and abundant here. Wall fruit much injured by heavy hail on April 10th.

DIVISION XXI. LEINSTER.

FITZWILLIAM SQUARE, DUBLIN.—February 15th, = 1·58, August 13th, = 2·48, November 28th, = 1·25, these three falls (5·31) make 19·6 per cent. of that in the whole year, 27·19.

DIVISION XXII. CONNAUGHT.

CLOONA CASTLE.—A fine summer with high temperature; but a very wet autumn, unusually so, very like the year 1863.

DIVISION XXIII. ULSTER.

FLORENCE COURT.—Rainfall 45·06 is under the average; January and February mild and comparatively dry; March and April mild and average rainfall; May, June, and July, warm; August, September, October, November, and December, were wet.

ALMA HOUSE, SYDENHAM.—The rainfall, 38·48, is 1·16 in. above the average of the previous seven years, 1867 to 1873 inclusive; the early spring and summer months were characterized by considerable dryness, 0·99 in. only fell in May, the average for that month being 2·55; this deficiency was more than compensated by heavy falls during the autumn and winter months; 1·85 in. was registered on 28th November, and 1·62 on 7th and 8th December, occasioning great floods in many parts of the county; these rains were followed by severe frosts towards the end of the year, 12° being registered as the min. on 22nd December.

MONEYDIG.—The first two months very mild, up to June 21st unusually dry; the last five months (except from the 12th to the 27th of August) exceedingly wet. May and June were too dry for flax and grass; potato and oat crops bad, and a bad year for honey.

BALLYSHANNON.—The year closed with a violent thunderstorm; notwithstanding the frequent and heavy rainfall in the months of autumn and the consequent difficulty of getting in the hay crops, the supply is plentiful and the price low compared with what it is in other parts; the potato crop, which may be called the staple of the county, has been good, and unusually free from disease.

CONVOY HOUSE, DONEGAL.—The year up to the middle of the summer rather dry, but harsh and cold; the autumn the wettest I can remember. December was alternations of frost, rain, and snow. Not much heat in the summer, the highest temperature being 78° in the shade, and 110° in the sun on the 22nd of August. There were

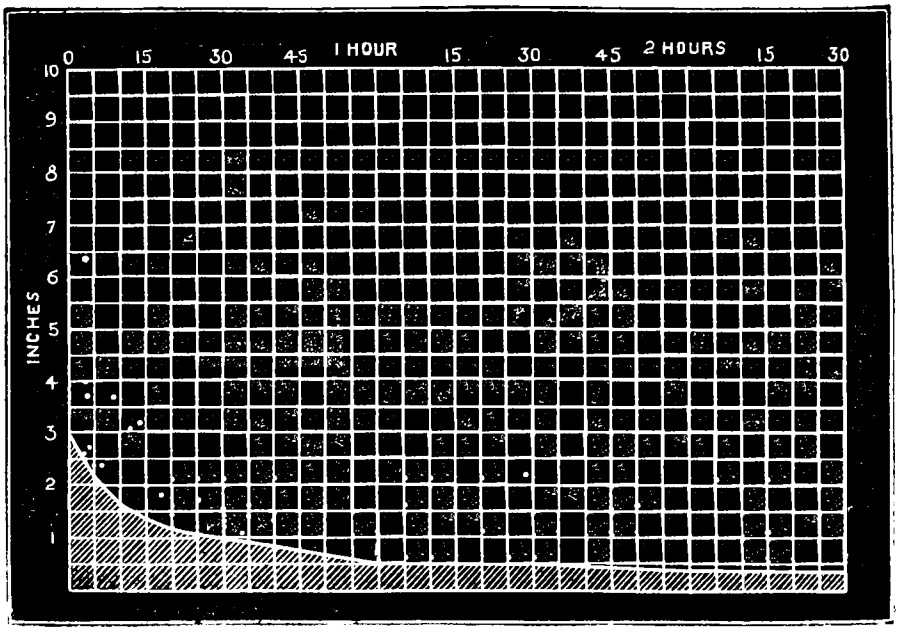
but few hot days, the lowest temperature was 22° on 30th December, with that exception it rarely went below 28°, much rough weather, but only a few regular gales; very little thunder or lightning during the year, and less aurora or electrical appearance than usual. Strange to say, though an ungenial year, it was a productive one in almost every thing except fruit. The rainfall is greater than 1873. Bar. very unsteady, and the usual weather signs greatly at fault, some of the finest weather coming with a low bar. I have observed for the last three or four years that floods of rain come from what we consider as *dry* points.

GLENDOEN, LETTERKENNY.—The fall, 56·19, is about 3·00 above the average (11 years), the rainy season begins about September 20th and goes on till the middle of April. We have very little frost. In the severe weather the rivers were not frozen, and ice on ponds was only three-quarters of an inch thick. Snow 2 in. deep. Mean temperature of the year in this sheltered valley 50°.

BALLYARE, RAMELTON.—The first six months of 1874 were unusually dry, and though a good deal of rain fell in the autumn quarter, still the total is much below the average.

HEAVY RAINS OF SHORT DURATION.

It is satisfactory to find that nearly all branches of rainfall work indicate at an early stage the normal limits of the various phenomena. It is but a few years since we first began collecting instances of very heavy falls of rain in short periods, but these few years have sufficed to show pretty well the points worthy of attention, and the normal and extreme limits of the phenomena. A minute's thought will convince any one that there are in every heavy rain two variables, quantity and duration, now what we require is the rate of fall, or the product of these two data. But if we, so to speak, dissect a rainfall, and take a very short portion of it, say five minutes, we shall find that for that short interval the fall may be much more intense than during the whole time the shower lasts. So much is this the case that in forming the following table we have been obliged to draw a curve, below which all falls are too unimportant to be worthy of record. That curve is shown by the shaded portion of the annexed figure,



and it shows rates of fall which occur so frequently as not to call for special mention. Mr. D. Grant Briggs, by diligent use of a storm rain gauge, has succeeded in obtaining quite a number of records of very high rates of fall, and in placing Calcethorpe at the top of the list. We should be glad to see fewer entries of precisely half-an-hour, one hour, &c., for we cannot believe that all the showers began and ended so methodically as these entries imply, and, therefore, take this opportunity of expressing our hope that greater care will be devoted to recording the precise time of beginning and ending, so that the rates shall be as accurate as possible.

Heavy Falls in Short Periods.

Date.	Division.	Station.	Duration.		Amount.	Rate per hour.
			hr.	min.	in.	inches.
Sept. 24 ...	VII.	Calcethorpe	...	3	·32	6·40
,, ,, ...	,,	,, ...	...	3	·20	4·00
June 22 ...	,,	,, ...	...	3	·13	2·60
July 11 ...	II.	Greenwich.....	...	4	·25	3·75
,, ,, ...	,,	,, ...	...	4	·25	3·75
Aug. 25 ...	,,	Tenterden.....	...	4	·18	2·70
July 11 ...	,,	Greenwich	...	5	·20	2·40
June 22 ...	VII.	Calcethorpe	...	6	·24	2·40
Sept. 24 ...	,,	,, ...	...	9	·56	3·73
July 27 ..	III.	Banbury	...	10	·50	3·00
Sept. 24 ...	VII.	Calcethorpe	...	12	·61	3·05
July 11 ...	II.	Greenwich	...	13	·70	3·23
June 22 ...	VII.	Calcethorpe	...	15	·51	2·04
July 11 ...	II.	Tenterden.....	...	15	·50	2·00
June 22 ...	VII.	Calcethorpe	...	18	·56	1·87
Sept. 23 ...	II.	Dymchurch	...	20	·62	1·86
Aug. 25 ...	,,	Tenterden.....	...	20	·47	1·41
July 28 ...	VII.	Branston Hall, Lincoln ...	...	25	·72	1·72
May 25 ...	III.	Wantage	...	28	1·30	2·79
July 11 ...	I.	Pinner Hill	...	30	1·02	2·04
,, ,, ...	II.	Lynwood	...	30	1·00	2·00
,, 24 ...	IV.	Norwich Lit. Institution..	...	30	·96	1·92
,, ,, ...	,,	Sprowston.....	...	30	·78	1·56
,, 29 ...	VII.	Boston	...	30?	·73	1·46
,, 22 ...	XX.	Tubrid, Cahir	...	30	·70	1·40
,, 29 ...	IV.	Geldeston	...	30	·55	1·10
June 26 ...	XII.	North Balfern	...	30?	·55	1·10
,, 24 ...	XVII.	Nairin	...	30?	·50	1·00
July 11 ...	II.	Dartford	...	33	·56	1·02
,, ,, ...	,,	Hartley, Cranbrook..	...	35	·90	1·54
June 29 ...	XVII.	Braemar	...	35	·85	1·46
,, 28 ...	XXIII.	Aughnacloy	...	40	·93	1·39
July 24 ...	XIII.	East Linton	1	0	2·20	2·20
,, 11 ...	II.	Rivcrhead, Sevenoaks.....	1	0	1·82	1·82
June 24 ...	XVIII.	Budgate Cawdor	1	0	1·60	1·60

Date.	Division.	Station.	Duration.		Amount.	Rate per Rate.
			hr.	min.	in.	inches.
July 11 ..	II.	Riverhill, Sevenoaks	1	0	1·50	1·50
,, 10 ...	III.	Oaklands, Aspley Guise ...	1	0	1·25 ?	1·25
,, 11 ...	II.	Deptford	1	0	1·07	1·07
,, ,, ...	,,	Greenwich...	1	0	1·03	1·03
,, 24 ...	VII.	Branston	1	0	·85	·85
May 24 ...	IV.	Mattishall.....	1	0	·81	·81
July 11 ...	VII.	Mansfield	1	0	·71	·71
,, ,, ..	I.	Tottenham	1	0	·67	·67
,, 10 ...	III.	Broughton	1	20	1·40	1·05
June 6 ...	II.	Riverhead, Sevenoaks.....	1	30 ?	1·50 ?	1·00
July 10 ..	III.	Banbury	1	30	1·18	·79
,, 11 ...	II.	Tenterden.....	1	45	1·03	·57
,, ,, ...	,,	Tunbridge.....	2	0	3·00	1·50
,, ,,	I.	Upper Clapton	2	0	1·70 ?	·85
June 6 ...	II.	Lynnwood.....	2	30	1·63	·65
May 25 ...	VI.	Stanton Long Vicarage	3	0	1·95	·65
July 14 ...	XVIII.	Tain	3	0	1·37 ?	·46
,, 23 ...	VIII.	Walton-on-the-Hill.....	5	30	1·70	·31
Aug. 13 ...	XVII.	Leochel Cushnie	6	0	2·40	·40

There are no very special features in the table to claim notice, and the diagram hardly needs any explanation except that the amounts quoted in the table are almost all represented on the diagram by dots at the intersection of lines denoting their duration and rate per hour.

THE PRINCIPAL HEAVY RAINS OF 1874.

NOTE.—The letter **M** throughout this article is used as an abbreviation of the term, "Maximum daily rainfall during the year." The day being in all cases, where not otherwise specified, the rainfall day, terminating at 9 a.m. on the succeeding civil day.

The amounts and per-centages given for each date are usually only those in which either (1) upwards of 2 inches fell, or (2) the fall was more than 5 per cent. of the total yearly amount. In certain cases even these limits have been raised, in order to avoid printing needless masses of figures, and yet draw attention to the leading features of the respective cases.

JANUARY 8TH.

A heavy fall occurred on this day in Devonshire, the N. of Cornwall, and the S. of Wales. The following are the **M** which reached or exceeded 2 inches.

V.	Ivybridge	2·43	=4·6	V. Tavistock, Kilworthy H.	2·18 =4·0
,,	Druid House	2·71	4·7	,, Holne Vicarage	3·61 4·9
,,	Dartmoor	2·35	3·5	,, Pentillie Castle	2·00 3·6
,,	,, Prison Garden.	3·50	4·9	XI. Merthyr Tydvil	2·00 4·0
,,	Tavistock	2·27	4·5	,, Treherbert	3·53 3·7

As this fall was the **M** chiefly at wet stations, it will be seen that the per-centages are very low for such large amounts.

FEBRUARY 25TH.

A heavy local fall (but not a **M**) in Co. Dublin; the following are the returns at some of the stations.

Fitzwilliam Square, W.	1·58 inches.
Eccles Street	1·12 ,,
Easton Lodge, Monkstown	1·75 ,,
Kingstown (to 7.30 a.m.)	1·48 ,,
Dean's Grange, Monkstown	1·70 ,,
Fassaroe, near Bray	1·86 ,,
Ordnance Survey Office, Phœnix Park	0·78 of an inch.

This last station was sheltered by the Dublin mountains, the wind being S.S.E.

FEBRUARY 26TH.

The principal area of **M** on this day was Surrey, but there were a few detached stations in Hereford, Worcester, and E. York.

II.	Croydon.....	1·39	= 5·8	per cent.
,,	Bromley Common	1·52	5·8	,,

MARCH 28TH.

An ordinary **M** along the hills from the Peak of Derbyshire to the neighbourhood of Kendal.

IX.	Dunford Bridge Reservoir	2·40	=5·2	per cent.
,,	Stone House.....	2·88	4·1	,,

APRIL 2ND.

The **M** at a few detached stations.

X.	Crosby Ravensworth	2·90	= 4·0	per cent.
XII.	Broomlands, Kirkpatrick Juxta	2·05	3·2	,,

MAY 22ND.

M at a few stations, chiefly in Worcestershire.

VI.	Evesham	1·35	= 6·1	per cent.

MAY 23RD.

M at some stations in Suffolk, Shropshire and Stafford.

IV.	Boxford	1·12	= 6·6	per cent.
VI.	Shrewsbury (M. & Co.)	1·20	7·1	,,
,,	,,	1·86	6·0	,,

MAY 25TH.

On this day (Whit Monday) several detached thunderstorms occurred, but they were mostly more remarkable for their electrical phenomena than for the amount of rainfall. The Winchmore Hill storm mentioned on p. 67 lasted from 10.20 a.m. to 2.57 p.m., during much of which time the storm appeared to be stationary overhead, and yet the total rainfall was only 0·24 in. In the neighbourhood of Sevenoaks there was an

ordinary thunderstorm, with steady but not excessive rain. At Wantage the rain was heavy, it began suddenly at 1.30 p.m., and between 1.37 and 2.5 (28 minutes) 1·30 in. fell. At Berkhampstead there was a violent storm, with heavy hail and rain, between noon and 2 p.m., total fall 1·13 in. Other rather heavy local falls were the following, **M** chiefly in Warwickshire.

IV.	Walthamstow	1·44	= 6·9	VI.	Bickenhill ...	1·33	= 6·0
VI.	Coventry.....	1·50	6·2	,,	Hinckley.....	1·38	6·2

JUNE 6TH.

An ordinary summer **M**, principally in the Thames valley.

II.	Holmwood, Dorking	2·35	= 6·7	per cent.
,,	Lynnwood	1·74	7·0	,,
III.	Field's Weir.....	1·55	7·7	,,

JULY 10TH.

Very similar to the last mentioned **M**, but limited to the South Midland counties.

III.	Hitchin.....	1·62	= 8·1	III.	Wrestlingworth..	1·15	= 6·0
,,	Aspley Guise ...	1·32	6·6				

JULY 11TH.

Severe thunderstorms producing local floods in Middlesex, Kent, and Herts. At Guildhall 1·31 in. fell, at Hackney there is no rain gauge, but judging from the floods (*Meteorological Magazine*) vol. IX. p. 98) the fall was much more. At Tottenham the heavy storm of the 11th (Saturday), was preceded by wind, which swayed the trees heavily in every direction, strewing the ground many yards around with broken boughs, four or five feet long. A large arm of an elm was broken off, tearing two others in its fall. Most of the ·72 of rain fell within the hour, coming down much too freely for spouting to carry it off, and the house was partially flooded. Some lightning accompanied the storm, which, as far as I recollect, raged chiefly from 4.30 to 5.30. At Pinner Hill, Watford the fall between 5.15 and 5.45 p.m. was 1·02. At Oaklands, Watford, only 0·32 in. fell; but at Welwyn it exceeded two inches. The heaviest rain, however, fell at Tunbridge, where three inches fell in two hours. Southwards the storm did not reach far beyond Tunbridge Wells, where 0·99 in. fell,

but northwards it was heavy (nearly two inches), as far as Sevenoaks. The following are the principal **M**:—

I.	Guildhall	1·31	= 6·5	II. Riverhill, Sevenoaks..	1·56	= 6·0
,,	Hadham House ..	1·70	8·5	,, Riverhead, ,, ..	2·00	6·1
II.	Tunbridge	3·00	11·5	III. Welwyn	2·50	11·9

JULY 14TH.

A tremendous fall of hail and rain in the Echt and Skene districts of Aberdeenshire, but it missed all the rain stations in the neighbourhood, so that we have no precise record of the quantity.

JULY 24TH.

A few isolated **M** are reported on this date, the most important are

II. Balham ..... 1·95 = 8·1 | XIII. East Linton... 2·41 = 8·9

JULY 28TH.

The **M** at a few stations in Lincoln and in the North of England, in the North of Scotland, also, heavy falls occurred.

IX.	Rastrick	1·70 = 6·8	per cent.
,,	Whitby	1·50 6·2	,,
X.	Newcastle-on-Tyne	1·50 6·8	,,

AUGUST 13TH.

This was one of the principal rains of the year. It was not the **M** at any English station south of Manchester, and it was quite unimportant at all stations south of the Cheviots—and even in Scotland there was only one rather heavy fall south of the Tay, viz., that at North Esk Reservoir in the Pentland Hills, south of Edinburgh. Between the Tay and the Moray Firth, and sharply bounded on the west by the Cairngorm Range, it was very heavy. Simultaneously, or nearly so, there was a very heavy fall on the East of Ireland. The following are some details:—

XII.	North Esk Reservoir	2·50	=7·1	XVIII.	Cromarty	1·10	=6·5
XVI.	Montroseness	1·80	8·6	,,	Farraline	2·50	6·5
XVII.	Braemar	2·67	7·0	XXI.	Fassaroe, Bray	2·25	7·0
,,	Coldstone	2·36	8·1	,,	Rockville	3·14	8·1
,,	,, Logie Manse	2·25	7·8	,,	Easton Lodge	2·36	8·4
,,	,, Loanhead	2·05	7·6	,,	Fitzwilliam Square.	2·48	9·2
,,	Blackstock, Midmar	2·31	7·7	,,	Eccles Street	1·67	6·4
,,	Cluny Castle	2·34	9·3	,,	Phœnix Park	1·71	6·1
,,	Leochel Cushnie	2·40	7·3	,,	Glasnevin	1·62	6·2

If we compare with the Aberdeenshire figures those from the west side of the Cairngorm range, the effect thereof is very evident. The following are the nearest stations—of course these small amounts are not M, they are simply inserted here for comparison :—Dalnaspidal 0·75, Dalwhinnie 0·63, and then, when we get further W. and N. Aviemore, 1·10, and Farraline 2·50. This rain very much resembled that of Nov. 6th, 1873, fully described last year, as is shown by the following table—

Div.	Station.	1873	1874	Diff.
XVII.	Coldstone School	2·55	2·36	— ·19
,,	,, Manse	2·46	2·25	— ·21
,,	,, Loanhead ..	2·43	2·05	— ·38
,,	Blackstock..	2·01	2·31	+ ·30
,,	Leochel Cushnie	2·00	2·40	+ ·40
,,	Wester Elchies	1·55	1·32	— ·23
,,	Keith	2·38	1·20	—1·18
,,	Forres.....	1·01	1·34	+ ·33

SEPTEMBER 3RD.

The M at many stations in the South Midland and Eastern Counties and at a few in the South Western :—

III.	Cambridge, Granchester Mill.	1·08	= 7·2
,,	,, Beech House	·99	6·2
IV.	Sudbury	1·19	6·6
,,	Wetherden...	1·35	7·9
,,	Drinkstone Park	1·43	7·9
,,	Culford	1·36	7·5
,,	Walsham le Willows	1·49	7·4
,,	Diss.....	1·40	7·0
,,	Halvergate Hall	1·78	8·5
,,	Lingwood Lodge	1·64	6·8
V.	Grendon...	2·00	3·6

SEPTEMBER 14TH.

The M in the Hebrides—

XV.	Corran	3·00	=4·8	XVIII.	Oronsay	2·00	=2·0
,,	Hynish	2·30	3·4	,,	Dunvegan	2·70	2·6
XVIII.	Inverie	2·80	3·1	,,	Portree	2·49	2·5

SEPTEMBER 16TH.

The M in the county of Leicester, but the max. only 1·15 in. at Market Harborough.

SEPTEMBER 23RD.

A heavy local M in the extreme E. of Kent. We add Dymchurch and Acrise to indicate the limits, although they were not the M.

II.	Dymchurch	1·16	=5·0	II.	Dover, Russell Street ...	2·03	=7·0
,,	Acrise	1·75	5·6	,,	Acol.....	1·35	7·9
,,	Hythe.....	2·06	6·4	,,	Margate	1·75	9·7

At Buckland, Dover, 2·98 is entered, but the fall of the previous day or two had not been recorded; the fall was *probably* about 2¼ inches for the above date.

SEPTEMBER 30TH.

A very paltry M at several detached stations, chiefly in the Southern and Midland counties.

I.	Regent's Park	1·26	=6·0	V.	Lyme Regis	2·45	=6·6
,,	Highgate	1·15	6·4	,,	Cricket St. Thomas	2·90	6·9
IV.	Wix	·97	6·1	,,	Ilminster.....	2·23	6·6
,,	Grundisburgh	1·17	6·5				

OCTOBER 1ST.

At the following stations the fall occurred one day later. In these cases it was not due to a breach of Rule IX., but it was a fact.

IV.	Sheering	1·43	=6·8	IV.	Wickham Market	1·32	=6·9
,,	High Roding	1·16	6·1				

OCTOBER 4TH.

A local M at Brighton and Hastings.

II. The Hollies..... .. 1·33=6·0

OCTOBER 6TH.

This was the most important rain which occurred during the year, and in fact it has probably had no equal since July 6th, 1872, to which its features are, in several respects, similar. As there are about eighty stations at which the fall exceeded two inches, we take in the following table only returns which reach or exceed three inches :—

V.	Dartmoor	3·00	=3·5	X.	Hawesmead	3·51	=6·2
VIII.	Highfield, Hawkshead	3·05	3·7	,,	Stavely Hall.	3·80	5·3
,,	Cartmel	3·05	5·7	,,	Matson's Grounds ...	3·24	4·6
,,	Coniston Parsonage..	3·85	4·0	,,	Windermere, The Wood	3·52	5·0
,,	Low Wray	3·17	4·5	,,	Brathay Vicarage.....	3·82	4·4
X.	Seathwaite	5·14	3·5	,,	Little Langdale	4·34	4·0
,,	Barrow House	3·30	4.1	,,	Elterwater.....	4·70	4·6
,,	Deer Close, Keswick..	3·03	4·5	,,	Lesketh Howe	3·75	3·9
,,	Brow Top ,,	3·10	4·6	,,	High Close	3·30	3·7
,,	Shu le crow ,,	3·28	3·6	XI.	Mardy	3·26	5·0
,,	Waterend ,,	3·05	4·8	,,	Aberdare	3·50	5·5
,,	Kendal, Kent Terrace	3·22	5·9	,,	Dolgelly.....	3·75	3·0
,,	,, Highgate ...	3·38	5·9	,,	Rhiwbrifdir	3·86	3·3
,,	,, Underfell ..	3·52	6·2	,,	Bryn Gwynant	5·32	4·4

In order that our readers may realize the considerable area over which these large falls extended, we have prepared a map (see *frontispiece*) on which the amount fallen is indicated by shading. Rain fell over the greater part of England and the whole of Wales, but no places are shaded where it was under an inch, and then the shading increases in intensity for each inch. We believe that the lines on it represent the true boundary of the respective falls with considerable accuracy, several hundred observations having been employed in the preparation of the map. It is not for us to say more respecting its quality, but we must call attention to the singular proof of the dependence of this fall upon the influence of mountains, which is afforded by the relatively small fall along the coast of Cumberland, and on one or two other coasts. It was in fact a steady, rather than a storm, rain, and therefore the amounts precipitated varied *approximately* in the order of the mean annual rainfall of the various localities.

We have italicized the word approximately because there are exceptions, *e.g.*, the Woodhead district between Derbyshire, Lancashire, and Yorkshire is a wet one, yet the fall there was quite unimportant. Taking it, however, as a broad general fact, it appears that the fall on October 6th was to a great extent typical of the average fall of rain in England and Wales.

We have no desire to repeat what has been said elsewhere respecting this heavy rainfall. Certain details are given on page 76; certain others will be found in the *Meteorological Magazine*, vol. IX., p. 162, and two or three others may follow here.

Broughton Hall, Cartmel.—3·05 in. in 24 hours (1·57 in 9 hours), the heaviest fall recorded in this neighbourhood for many years.

Woodlands.—Floods greater than have been known this century, although not the max. with us, owing probably to the much greater fall on the hills further N., the wind S.W., the rainfall seems to have been greater the further the wind travelled inland; *e.g.*, Broughton, 3 miles to S., the fall was considerably less than here, whilst at Torver, $3\frac{1}{2}$ miles N., it was more than double that of ours.

Bryn Gwynant.—The unprecedented floods of October 6th raised the lakes unusually high, overflowing the roads; the river at Beddgelert rose so high that some of the lower houses had 2 or $2\frac{1}{2}$ feet of water in them.

Taking each area at its mean value, and taking the fall in the drier part of England (as facts not herein quoted prove that we may do) at

half-an-inch, we can determine, with a close approach to accuracy, the total precipitation over England and Wales.

Average Rainfall.	Area over which it prevailed. Square miles.	Weight of Water deposited. Tons.
0·50 in.	33,196	1,072,894,720
1·50 in.	20,800	2,016,768,000
2·50 in.	2,600	420,160,000
3·50 in.	1,040	235,289,600
4·50 in.	156	45,377,280
5·50 in.	20	7,110,400
Total ...	... 57,812	3,797,600,000

It is rather a curious (purely fortuitous) circumstance that this grand total of four thousand million tons is almost exactly equal to a uniform fall of one inch over the whole of England and Wales. There is another aspect of the question which has not yet received adequate study :—How much air must have been deprived of its vapour to provide this uniform deposit of one inch of rain? A cubic inch of water contains 252 grains. Taking the temperature of the air at 55°, a cubic foot can only contain five grains, and as the air was certainly not deprived of half its moisture, even allowing for change of temperature, each cubic foot can only have yielded at the most three grains, but there are 1728 cubic inches in a cubic foot and, therefore, each cubic inch can only have given $\frac{1}{576}$th (say $\frac{1}{600}$th) of a grain, as the Inch of rain requires 252 grains, we have the result that (252 × 600=) 151,200 vertical inches, or 12,600 feet, or rather more than 2 miles high of air must have been dried to yield the water deposited. Here, however, we at once come upon the fact that the air was not at rest, and that supplies may have come in laterally. This is true, but it is also true that the rain was by no means limited to the area of England and Wales, and, therefore, though it is true that there was a change in the body of air over the country, it is also true that the total deposit of water is not to be reckoned by that over England and Wales. We are not prepared to pursue this subject further on the present occasion, but we have given the facts, and suggested a mode of discussing them, and leave the development to others who have more time for the purpose.

OCTOBER 20TH.

A moderate M chiefly on the W. coast of Scotland.

XV.	Kilmory	2·27=3·2	XVIII.	Inverinate	2·25=2·4
,,	Arddarroch	2·13 2·5	,,	Laggan	2·02 2·9
,,	Stonefield.....	2·70 3·3			

OCTOBER 29TH.

The **M** at several stations near the mouth of the Thames, but an unimportant one.

II.	Chatham	1·80=10·6	IV.	Shoeburyness	1·04=7·4
,,	Sittingbourne	1·56 7·4	,,	Cold Norton	1·12 6·6

NOVEMBER 28TH.

A very general **M**, but not at all an important one.

II.	Leigh Park	1·25=6·2	IX.	Moorgate Grove	1·60=8·0
V.	Abbotsbury	1·68 6·0	,,	Wath-upon-Dearne	1·13 6·3
VII.	Mansfield	1·49 6·5	X.	Cragside	2·95 9·0
,,	Whitemoor	1·09 6·0	XXI.	Balbriggan	1·95 6·3
,,	Worksop	1·28 6·4	,,	Drumcashel	2·16 7·0
IX.	Brincliffe Rise	1·74 6·7			

NOVEMBER 29TH—30TH.

It is not easy to be quite certain as to the date of some of the following entries, as even now all our correspondents do not attend to Rule IX., and, therefore, some of the entries for the 29th probably belong to the 28th, and some of those for the 30th to the 29th. All three days were rainy, hence the difficulty of separation.

VII.	West Hallam	1·27=6·3	XVI.	Burntisland	1·92=7·4
IX.	Goole	1·00 6·7	,,	West Grange	2·00 6·1
,,	Beverley	1·68 9·3	,,	Craigton	2·20 5·5
,,	Whitley Con. Home	1·54 7·3			

NOVEMBER 30TH.

IV.	Waltham Abbey	1·47=8·2	XI.	Gt. Orme's Head	1·77=6·5
IX.	Filey	1·47 7·0	XIII.	St. Abb's Head	1·59 7·2

DECEMBER 8TH.

This **M** was almost exclusively confined to Yorkshire and Northumberland, although, singularly enough, nearly all the following values are from other counties.

IX.	Langcliffe	2·00=4·2	XI.	Llanfrechfa	2·00=4·4
X.	Wolsingham	2·07 6·9	XX.	Killarney	2·00 3·2
,,	Whelprigg	2·30 4·6			

DECEMBER 31ST.

There was a heavy rain throughout Cornwall on this day, which gave the **M** at many stations, but the largest was only

V. Poltair, Penzance..... 1·70 = 3·3

MAXIMUM FALLS IN 1874.

FOR the efficient preparation of the previous article, upwards of a thousand returns were examined, and the details of the heaviest falls in the year extracted. The pile of MS. thus accumulated having been utilized for that article, it has, as in previous years, been re-discussed for the compilation of tables precisely similar in design to those which we have now given annually for several years.

Table I. gives, as in previous years, the largest sixteen falls reported during the year. It is a very remarkable, and we believe unprecedented circumstance, that all the entries but two refer to one date, October 6th.

Table II. enables us to compare the results of Table I. with those for previous years; the facts which it proves are (1) that these sixteen maxima are considerably greater than usual: they average 3·96 in., whereas the mean of the previous nine years would have led us to expect them to average only 3·40 in.; (2) they are greater than have occurred in any other year except 1872; (3) they were a much less per-centage of the yearly fall at the stations at which they occurred than usual, in fact the least except in 1866, which, coupled with column 4, proves that (as we know from the frontispiece, and can see from Table I.,) they occurred in wet districts.

Table III. gives the highest sixteen per-centages, that is to say, the sixteen returns of an amount of rainfall in 24 hours *ending at* 9 *a.m.*, which were the largest proportion of the total fall in the year.

Table IV. is an abstract of Table III., and, like Table II., enables us to compare the records of 1874 with previous years. This shows that, considered in relation to the total yearly rainfall, the heavy falls in 1874 were very near the average. We think, however, that it would be well if all our readers would look carefully at columns 5, 6, and 7 of Table IV., and then turn to the "Rules" preceding the general tables, and read the XVIth. They must not console themselves with the idea that these large amounts occur only in wet localities; the last four entries are all from dry stations, averaging scarcely 24 inches per annum. As we have often stated, there is no part of the country where 4 inches may not fall in 24 hours, and our observers are therefore bound to provide for such an occurrence.

Table V. gives the gross results of all the returns; it shows (1) that the number discussed was 1010, being about 200 more than in any previous year, and (2) that the heavy falls in 24 hours averaged 1·41 inches, or 4·4 per cent. of the yearly total, both the amount and the per-centage being very near the average.

TABLE I.—*Maximum Falls in* 1874.

Date.	Div.	Stations.	Depth.	Per cent.	Fall in year.
Oct. 6	XI.	Bryn Gwynant	5·32in.	4·4	121·58 in.
,, 6	X.	Seathwaite	5·14 ,,	3·5	148·79 ,,
,, 6	X.	Elterwater	4·70 ,,	4·6	101·60 ,,
,, 6	X.	Little Langdale	4·34 ,,	4·0	107·52 ,,
,, 6	XI.	Rhiwbrifdir	3·86 ,,	3·3	116·56 ,,
,, 6	VIII.	Coniston Parsonage	3·85 ,,	4·0	96·25 ,,
,, 6	X.	Reston Hall	3·80 ,,	5·3	72·45 ,,
,, 6	X.	Windermere, The Wood	3·82 ,,	4·4	70·41 ,,
,, 6	XI.	Dolgelly	3·75 ,,	3·0	74·60 ,,
,, 6	X.	Lesketh Howe	3·75 ,,	3·9	95·74 ,,
Jan. 8	V.	Holne Vicarage	3·61 ,,	4·9	72·92 ,,
Oct. 6	X.	Kendal, Underfell	3·52 ,,	6·2	56·60 ,,
,, 6	X.	,, Hawesmead	3·51 ,,	6·2	56·77 ,,
Jan. 8	V.	Dartmoor Prison Garden	3·50 ,,	4·9	71·25 ,,
Oct. 6	XI.	Abernant	3·50 ,,	5·5	63·60 ,,
,, 6	X.	Kendal, Highgate	3·38 ,,	5·9	56·51 ,,

TABLE II.—*Comparison of Maximum Falls with those in previous years.*

	MEAN.			ABSOLUTE.			
Years.	Depth.	Per Cent.	Mean total fall at these stations.	Depth.	Per cent.	Station.	Division.
	in.		in.	in.			
1865 ...	3·67	6·4	61·8	6·41	5	Seathwaite.....	X.
1866 ...	3·40	4·4	86·2	6·38	4	Seathwaite.....	X.
1867 ...	3·17	9·0	42·5	4·78	16	Hartlip	II.
1868 ...	3·32	6·1	65·9	5·60	5	Camusinas.....	XV.
1869 ...	3·68	5·0	77·7	6·70	4	Seathwaite.....	X.
1870 ...	3·20	7·5	43·8	6·00	17	Tongue	XIX.
1871 ...	3·08	5·7	61·6	4·24	10	Melbury.....	X.
1872 ...	4·10	6·6	73·1	5·82	3	Seathwaite.....	X.
1873 ...	2·97	6·2	60·7	4·20	3	Seathwaite	X.
Mean ...	3·40	6·3	63·9	5·57	7	.....	...
1874 ..	3·96	4·6	86·5	5·32	4	Bryn Gwynant	XI.
Diff. ...	+·56	—1·7	+22·6	— ·25	—3	... ..	...

TABLE III.—*Maximum Per-Centages in* 1874.

Date.	Div.	Stations.	Per cent.	Depth.	Fall in year.
July 11 ...	III.	Welwyn.....	11·9	2·50in.	21·31 in.
,, ,, ...	II.	Tunbridge.....	11·5	3·00 ,,	26·51 ,,
Oct. 29 ...	II.	Chatham	10·6	1·80 ,,	16·73 ,,
Sept. 24 ...	II.	Margate	9·7	1·75 ,,	18·22 ,,
Nov. 29 ...	IX.	Beverley	9·3	1·68 ,,	18·45 ,,
Aug. 13 ...	XVII.	Cluny Castle.....	9·3	2·34 ,,	24·90 ,,
,, ,, ...	XXI.	Fitzwilliam Square, Dublin..	9·2	2·48 ,,	27·19 ,,
July 24 ...	XII.	E. Linton	8·9	2·41 ,,	27·47 ,,
Dec. 13. ...	IX.	Thorpe Grange	8·8	2·20 ,,	24·94 ,,
Aug. 13 ..	XVI.	Montroseness	8·6	1·80 ,,	21·12 ,,
July 11 ...	I.	Upper Clapton	8·5	1·70 ,,	19·98 ,,
Sept. 3 ...	IV.	Malvergate Hall	8·5	1·78 ,,	21·06 ,,
Aug. 13 ...	XXI.	Easton Lodge, Dublin.....	8·4	2·36 ,,	28·06 ,,
July 24 ...	II.	Lalham	8·1	1·95 ,,	23·96 ,,
,, 10 ...	III.	Hitchin	8·1	1·62 ,,	20·25 ,,
Aug. 13 ...	XXI.	Rockville	8·1	3·14 ,,	39·18 ,,

TABLE IV.—*Comparison of Maximum Per-Centages with those in previous years.*

MEAN.				ABSOLUTE.			
Years.	Per Cent.	Depth.	Mean total fall at these stations.	Per cent.	Depth.	Station.	Division.
		in.	in.		in.		
1865 ...	9·9	2·62	28·4	13·0	4·40	Fleckney	VII.
1866 ...	8·1	2·31	29·3	10·0	2·48	Burton	VI.
1867 ...	11·0	2·85	25·3	16·0	4·78	Hartlip	II.
1868 ...	8·6	2·55	30·1	11·0	4·00	Tongue	XIX.
1869 ...	7·9	2·17	27·9	10·0	3·40	Tillydesk	XVII.
1870 ...	10·0	2·34	22·9	17·1	6·00	Tongue	XIX.
1871 ...	9·0	2·43	26·8	11·5	3·62	Warter	IX.
1872 ...	8·1	3·43	42·5	10·0	3·70	Hillington Hall	IV.
1873 ...	9·7	2·39	24·7	11·8	2·77	Oscott.....	VI.
Mean...	9·1	2·57	28·7	12·3	3·91	.....	...
1874 ...	9·2	2·16	23·7	11·9	2·50	Welwyn.....	III.
Diff. ...	+ ·1	—·41	— 5·0	— ·4	—1·41	.....	...

TABLE V.—*Comparison of the Mean of all the Maximum Falls in* 1874 *with similar data for previous years.*

Year.	Number of Returns.	Mean Per-centage.	Mean Amount.	Mean Total Fall in year.	1867 being assumed =100.	Ratio of Rainfall to the Mean.	Total Fall being assumed =34 in. Mean Max. =
1865	481	5·1	1·70 in.	33 in.	106	102	5·00 per cnt.
1866	590	3·7	1·48 ,,	40 ,,	129	119	4·36 ,,
1867	584	4·6	1·44 ,,	31 ,,	100	100	4·24 ,,
1868	676	4·3	1·43 ,,	33 ,,	106	106	4·21 ,,
1869	637	4·2	1·42 ,,	34 ,,	108	101	4·18 ,,
1870	687	4·9	1·30 ,,	27 ,,	81	82	3·82 ,,
1871	752	4·9	1·49 ,,	30 ,,	98	97	4·38 ,,
1872	743	3·4	1·59 ,,	47 ,,	151	136	4·68 ,,
1873	809	4·6	1·35 ,,	29 ,,	94	95	3·97 ,,
Mean ...	662	4·4	1·47	34	108	104	4·32 ,,
1874	1010	4·4	1·41	32	103	96	4·14 ,,
Diff.....	+348	0·0	— ·06	— 2	— 5	— 8	— ·18 ,,

ON THE MONTHLY FALL OF RAIN IN THE BRITISH ISLES DURING 1874.

WE always receive with pleasure suggestions for the improvement of this publication, and within reasonable limits never allow either trouble or cost to prevent the adoption of all which in any way commend themselves to our judgment.

We were told last year that the mean monthly rainfall over the kingdom would be an acceptable addition to the table on page 150. We have therefore had the following table compiled from the 108 returns on pages 140 to 145 but we are by no means sure that it is desirable to have similar ones computed in future, for it appears to us that the first six columns on page 150 tell the history of the months in far plainer language.

Mean Monthly Rainfall in 1874.

	England.	Wales.	Scotland.	Ireland.	British Isles.
No.of Stations	41	12	35	20	108
January	2·58	4·60	4·59	2·87	3·51
February.....	2·08	3·33	1·74	2·62	2·21
March	1·42	2·92	3·51	1·93	2·35
April	1·74	2·12	2·56	2·20	2·13
May.....	1·30	1·49	1·75	1·55	1·52
June	1·28	1·34	1·51	1·51	1·41
July	1·45	2·42	3·12	2·77	2·34
August	2·86	5·80	5·34	4·32	4·26
September ...	3·63	4·82	4·59	3·89	4·12
October	3·74	5·16	6·61	4·77	5·02
November ...	3·09	4·47	4·37	3·99	3·82
December ...	2·93	5·08	2·84	4·37	3·41
Total	28·10	43·55	42·53	36·79	36·10

This history is that of a rather dry January, followed by three months each slightly drier than usual, and these by an extremely dry period May to July. The remaining five months were mostly wet, but by no means exceptionally so.

Before dismissing this subject, we have another mode of epitomizing the history of the months, to submit for consideration, namely, that on the following page, which we shall not explain, because, if we thought it required any explanation, we should also consider it unworthy of a place in this work.

Districts in which the Fall was

Month.	Below the average.	Near the average.	Above the average.
January ..	S. E. and N. England, S. Scotland and throughout Ireland.	W. of England, Central Scotland.	Centre, S. W. and N. W. of England, all Wales, and N. of Scotland.
February ..	Extreme E. & N. of England, and through Scotland, except Deeside.	Sussex, Dorset, Herts, and in England between lat. 53° & 55°, N. Wales, and in the W. and N. of Ireland.	Centre, W. and S. W. of England, S. Wales, Deeside, and S.E. of Ireland.
March	All England as far N. as Manchester, England and Scotland near lat. 55°, and all Ireland.	The North Midland Counties of England, all Wales, and all Scotland except the S. and the extreme W.	Only near the Lancashire and Yorkshire hills.
April	N. of England, and E. of Ireland.	The greater part of England, all Wales, and central Ireland.	Some stations in S. E. and extreme S. W. of England, in N. of Scotland, and W. of Ireland.
May	Throughout the whole country, except as noted in the next column.	A few isolated stations in the centre and N. E. of England, and the N. of Wales.	Nowhere.
June	Throughout the whole country, except as subsequently stated.	In the Orkney Isles.	In the Hebrides.
July	All England, except as subsequently mentioned Wales except the centre, Invernesshire and the S. of Ireland.	The S. Midland and Northern Counties of England, the S. of Scotland, all Ireland except the S.	Central Wales, Aberdeenshire, and the Orkneys.
August ...	S. E. England, N. Wales, S. E. Ireland.	W. and centre of England, N. W. Scotland.	S. W. and N. W. England, Wales except the N., the E. of Scotland Ireland except the S. E.
September.	Nowhere.	S. E. of England, E. of Scotland, Ireland except the S. W.	Throughout the country except as previously noted.
October ...	The N. of England except in the Lake District, N. Wales and Ireland except the S. E.	Central England, E. Scotland.	S. E. England, S. Wales, Scotland except on E. coast, S. E. Ireland
November.	In Kent, Devon, York, Cumberland, S. Wales, Scotland except the S. W., and Central Ireland.	Over the country generally except as noted in the other columns.	W. Midland and N. Midland Counties of England, N. Wales, S. W. Scotland, and E. Ireland.
December.	In the English Lake District and throughout Scotland.	S. Midland Counties of England, central Wales.	All other parts.

MONTHLY RAINFALL IN 1874.

ENGLAND.

Division ..	I.	II.					III.			
County ..	Middlesex.	Surrey.	Kent.	Sussex.	Hants.	Berks	Herts.	Bucks.	Oxford.	North-ampton.
Station ..	Camden Square	Guildford Gram. Sch.	Hythe.	Forest L. Maresfield.	Isle of W. S.Lawrence	Welford.	Bayford-bury.	Great Missenden.	Rad. Obser-vatory.	Welling-borough.
Ft. abv. Sea	111	187	12	247	75	335	250	...	210	...
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
January	1·18	1·19	2·28	2·11	2·14	2·72	1·46	2·23	2·30	1·90
Feb. ..	·91	2·32	1·08	2·10	1·35	2·61	1·27	2·45	1·68	1·70
March..	— ·39	— ·53	1·32	·82	·76	— ·76	— ·64	— ·78	·61	·88
April ...	1·26	2·30	3·51	2·33	2·34	1·53	1·63	2·07	1·28	1·15
May ..	1·14	·57	— ·93	— ·59	·62	1·12	·96	·79	1·56	1·51
June ...	2·05	3·05	2·58	3·10	2·26	1·30	1·73	1·39	·68	— ·71
July ...	·82	1·33	2·34	1·79	— ·56	·93	1·39	1·07	— ·49	·82
August.	1·32	1·91	3·77	2·63	1·45	2·09	1·17	1·55	1·82	1·94
Sept. ...	2·62	2·76	+5·15	3·40	3·63	3·33	+2·87	+3·72	+3·34	+3·68
October.	+3·34	+4·58	3·50	+4·73	+4·63	+4·00	2·41	3·53	3·13	2·99
Nov. ...	2·21	2·91	2·61	2·98	3·17	2·34	2·13	2·67	2·53	2·12
Dec. ...	1·58	2·16	3·21	2·59	2·68	2·06	1·68	1·88	1·82	2·07
Totals. .	18·82	25·61	32·28	29·17	25·59	24·79	19·34	24·13	21·24	21·47

Division ..	III.			IV.			V.			
County ..	Hunts.	Bedford.	Cambridge.	Essex.	Suffolk.	Norfolk.	Wilts.	Dorset.	Devon.	Cornwall.
Station ..	Whittlesea.	Bedford.	Wisbech.	Chelmsford	Ipswich.	Swaffham.	Alderbury.	Osmington.	Bovey Tracey.	St. Austell.
Ft. abv. Sea	...	110	10	86	104	160	263	225	94	300
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
January	1·32	1·45	1·28	1·04	·94	1·41	2·41	2·94	5·00	5·34
Feb. ...	1·10	1·20	— ·93	·78	·84	·91	2·62	2·42	4·36	4·21
March..	— ·46	·65	1·11	— ·47	— ·55	1·21	·68	·66	— ·72	1·82
April ...	·97	1·10	1·14	1·29	1·31	1·12	1·79	2·26	2·94	2·76
May ...	1·35	1·11	1·53	1·72	·80	— ·81	·83	— ·61	1·31	— ·52
June ...	1·58	— ·52	1·63	1·84	1·10	1·96	1·36	1·50	1·53	1·92
July ...	·83	1·35	1·31	1·38	·59	1·07	— ·60	·98	1·37	1·30
August.	+2·70	1·21	2·06	1·10	·69	2·06	2·34	2·80	3·45	4·31
Sept.....	2·33	+3·15	+2·78	2·04	+2·69	2·81	2·92	3·74	6·28	7·54
October	1·96	1·50	1·44	+4·18	1·57	1·66	+4·66	+5·81	+6·98	4·78
Nov. ...	1·82	2·00	2·21	1·97	2·22	2·80	2·64	3·38	4·50	5·41
Dec. ...	1·37	1·80	2·03	1·75	1·67	+2·87	3·05	4·16	5·91	+9·43
Totals..	17·79	17·04	19·45	19·56	14·97	20·69	25·90	31·26	44·35	49·34

MONTHLY RAINFALL IN 1874—(*continued.*)

ENGLAND—(*continued.*)

Division ..	V.	VI.						VII.		
County ...	Somerset.	Glos'ter.	Hereford.	Salop.	Stafford.	Worcester.	Warwick.	Leicester.	Rutland.	Lincoln.
Station ..	Ilminster.	Nailsworth	Stretton.	Woolstaston.	Barlaston.	Hagley.	Leamington.	Loughboro'	Thistleton.	Miningsby
Ft. abv. Sea	178	160 ?	198	790	500	636	195	400 ?	...	162
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
January	3·31	4·32	2·80	2·64	2·92	2·43	2·76	1·97	1·75	1·22
Feb. ...	3·85	2·68	2·53	2·95	2·81	3·34	1·77	1·70	1·73	1·78
March..	— ·56	1·79	— ·78	1·32	1·59	—1·16	1·08	1·06	1·11	·87
April ...	1·92	2·05	1·54	1·25	1·49	1·84	1·32	1·60	·95	·92
May ...	·99	— ·89	1·41	2·03	1·44	2·30	1·58	1·06	·67	·89
June ...	1·80	·99	1·02	— ·37	— ·81	1·92	— ·53	— ·40	— ·46	— ·60
July ...	1·10	·98	·85	1·20	1·69	1·59	1·48	·80	·89	·65
August.	2·47	3·85	2·49	3·75	3·66	2·63	2·29	2·14	2·09	2·23
Sept. ...	+7·07	+5·80	+4·09	+4·22	3·36	+3·54	+3·19	+3·28	2·42	1·57
October	4·48	3·99	2·93	3·10	2·83	2·59	2·59	2·39	2·31	2·24
Nov. ...	2·42	2·91	2·69	3·48	+4·43	3·32	2·27	2·67	+2·76	2·34
Dec. ...	3·89	4·01	2·67	2·55	3·27	3·13	1·89	2·02	2·14	+2·59
Totals..	33·86	34·26	25·80	28·86	30·30	29·79	22·75	21·09	19·28	17·90

Division ..	VII.		VIII.		IX.			X.		
County....	Notts.	Derby.	Cheshire.	Lancashire.	Yorks. W.R.	Yorks. E.R.	Yorks. N.R.	Durham.	Northumberland.	Cumberland.
Station ..	Mansfield.	Buxton.	Chelford.	Blackburn. W.W.Office	Leeds.	Warter.	Northallerton.	Ushaw.	Unthank Hall.	Mirehouse
Ft. abv. Sea	350	989	260	400	95	230	133	600	380	310
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
January	1·70	5·51	2·70	4·45	1·42	1·32	1·85	1·74	3·48	5·94
Feb. ...	2·03	3·41	2·09	1·85	1·18	1·55	1·57	1·28	1·77	3·59
March..	·88	4·86	2·48	5·50	1·77	1·90	— ·47	—1·11	3·82	3·74
April ...	1·77	2·35	1·49	2·26	1·12	1·82	·97	1·23	2·75	2·59
May ...	1·39	2·10	1·67	1·96	1·02	2·18	1·98	3·21	1·95	1·35
June ...	— ·49	—1·12	— ·65	— ·58	— ·41	— ·75	·78	1·22	—1·68	— 1·05
July ...	2·06	2·92	2·50	3·53	2·52	1·58	1·60	1·17	2·48	2·45
August.	2·09	6·59	+3·88	+6·24	1·88	2·61	2·36	2·33	+5·02	7·10
Sept. ...	2·40	3·93	3·80	3·80	2·02	1·68	2·70	1·77	3·96	7·85
October	2·54	5·27	3·37	4·51	1·83	2·42	2·67	1·76	4·77	+ 10·64
Nov. ...	+3·12	+7·71	2·95	3·77	2·44	+4·60	·96	3·01	4·73	5·16
Dec. ...	2·48	4·42	2·96	2·34	+2·57	3·92	+4·01	+3·89	3·13	2·68
Totals..	22·95	50·19	30·54	40·79	20·18	26·33	21·92	23·72	39·54	54·14

MONTHLY RAINFALL IN 1874—(*continued*)

ENGLAND (*continued*). WALES.

Division ..	X.	XI.								
County....	Westmore-land,	Monmouth	Glamorgan	Carmar-then,	Pembroke.	Cardigan.	Brecon.	Radnor.	Mont-gomery.	Flint
Station....	Kendal.	Dingestow.	Pentyrch.	Asylum.	Tenby.	Goginan.	Watton.	Heyhope Rectory.	Carno.	St. Asaph
Ft. abv. sea	146	250	100	185	180	295	437	690	550	273
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
January	6·76	3·87	+6·91	6·60	5·03	4·52	4·54	3·86	5·00	1·63
Feb. ...	3·10	2·95	2·99	4·92	4·35	2·72	3·73	2·81	3·00	1·30
March..	4·38	1 01	3·50	3·61	2·52	3·76	2·72	2·15	5·00	1·44
April ...	1·96	1·99	1·89	3·02	2·16	1·91	3·79	1·19	—1·00	1 13
May ...	— 1·05	— ·33	2·03	— ·64	— ·79	1·59	·92	·87	3·00	2·84
June ...	1·21	·89	2·14	1·71	1·64	—1·28	2·05	— ·42	1·50	— ·45
July ...	2·98	·88	—1·63	2·05	1·86	3·11	— ·89	1·66	3·50	2·98
August.	7·40	2·85	6·45	7·33	6·16	+7·65	3·54	+5·44	+6·00	2·65
Sept. ...	5·76	+5·11	6·36	+8·01	5·17	4·80	+5·18	3·68	4·00	2·07
Oct. ..	+12·60	3·36	5·97	6·79	5·25	4·04	3·93	4·58	4·50	3·57
Nov. ..	4·22	1·94	3·36	4·22	5·10	5·18	2·98	4·05	3·25	3·91
Dec. ...	3·69	3·14	5·77	6·68	+6·59	5·54	3·79	5·03	5·25	+3·99
Totals..	55·11	28·32	49·00	55·58	46·62	46·10	38·06	35·74	45·00	27·96

WALES (*continued*). SCOTLAND.

Division ..	XI.			XII.				XIII.		
County....	Denbigh	Merioneth	Carnarvon	Wigton	Kirkcud-bright	Dumfries	Roxburgh	Selkirk	Peebles	Berwick
Station....	Rosset	Dolgelly	Port Madoc	N. Balfern	Dalbeattie	Kirk-patrick	New Castleton	Borthwick-brae	Glenrath	Dunse
Ft. abv. sea	58	43	10	75	60 ?	346	400	800	764	267
	in.	in.	in.	in.	in.	in.	in.	in	in.	in.
January	1·87	6·97	4·39	4·24	5·78	7·35	6·60	4·00	3·62	—1·09
Feb. ..	1·45	6·45	3·33	2·26	2·68	3·70	4·40	2·40	1·93	1·47
March..	·60	4·87	3·81	3·21	2·48	4·63	4·60	3·30	2·66	1·57
April ...	1·36	3·93	2·03	1·90	3·05	4·43	3·20	2·50	2·95	1·12
May ...	1·35	— 1·79	1·79	— ·95	— 1·05	·80	— 1·40	—1·60	1·55	1·65
June ...	— ·44	1·94	—1·62	1·39	1·38	— ·75	1·50	1·80	—1·22	1·27
July ..	1·74	4·97	3·76	3 14	3·00	5·05	2·50	2·40	2·90	3·11
August.	2·90	+10·79	+7·81	6·27	6·13	8·05	6·30	7·20	5·11	3·83
Sept. ...	2·23	6·11	5·17	3·24	5·12	7·50	4·70	4·00	3·28	1·70
Oct. ...	2·88	9·96	7·07	+8·03	+11·30	+13·40	+11·50	+8·90	+5·97	2·48
Nov. ...	+3·55	9·66	6·46	5·70	5·30	6·50	5·40	5·40	5·59	+4·04
Dec.	3·03	7·16	4·99	4·38	2·63	2·30	2·50	4·10	3·81	3·57
Totals..	23·40	74·60	52·23	44·71	49·90	64·46	54·60	47·60	40·59	26·90

MONTHLY RAINFALL IN 1874—*(continued)*.

SCOTLAND (*continued*).

Division ..	XIII.			XIV.			XV.			
County....	Haddington	Edinburgh	Linlithgow	Lanark	Ayr	Renfrew	Dumbarton	Stirling	Bute	Argyll (mainland
Station....	East Linton	Edinburgh Charlte-sq	Linlithgow	Baronald	New Cumnock	Newton Mearns	Arddarroch	Polmaise	Pladda	Airds
Ft. abv. sea	90	230	...	505	860	350	80	12	55 ?	38
	in.	in.	in.	in.	in.	in.	in.	in.	in.	
January	1·20	1·74	3·50	3·10	6·94	6·44	11·18	4·20	3·77	7·20
Feb. ...	— ·60	— ·70	— ·95	1·33	2·67	1·84	2·95	—1·00	1·25	3·10
March..	1·00	1·73	2·22	1·97	4·51	5·20	9·78	3·10	3·45	7·20
April ...	·68	·90	2·34	1·76	2·54	3·59	6·23	2·50	2·37	4·10
May ...	1·37	1·50	1·29	1·48	—1·26	2·75	2·78	2·00	1·95	2·60
June ...	1·47	1·60	1·29	— ·68	1·85	— 1·30	— 1·84	1·50	— ·93	2·90
July ...	4·52	3·34	2·66	2·83	3·36	2·66	4·70	+8·00	2·37	5·10
August.	4·54	+4·87	+5·41	+5·54	5·25	4·83	6·78	4·00	4·96	7·70
Sept. ..	2·16	1·75	2·77	3·87	5·35	6·24	11·22	3·50	4·08	9·20
Oct. ...	2·26	2·42	4·19	5·33	+8·56	+ 11·17	+ 14·03	6·90	+7·17	+ 10·80
Nov. ...	+4·69	3·11	2·51	3·46	5·99	4·88	9·79	3·90	5·50	4·30
Dec. ...	2·98	2·10	1·00	1·88	2·10	4·50	2·94	2·00	2·83	— 2·30
Totals..	27·47	25·76	30·13	33·23	50·38	55·40	84·22	42·60	40·63	66·50

Division ..	XV.	XVI.					XVII.			
County....	Argyll (insular)	Clackmannan	Kinross	Fife	Perth	Forfar	Kincardine	Aberdeen	Banff	Elgin
Station....	Islay,		Loch Leven	Auchtermuchty	Callander	Dundee	Brechin	Braemar	Gordon Castle	Elgin
Ft. abv. sea	71	...	...	180	340	50	250	1114	70	50
	in.		in.	in.	in.	in.	in.	in.	in.	in.
January	4·44		3·40	2·99	8·60	1·87	2·40	2·91	1·47	2·02
Feb. ...	2·92		1·10	·97	— 1·40	— ·63	1·30	2·54	1·31	— ·66
March..	3·65		2·40	2·22	6·90	·84	1·60	2·82	1·78	2·70
April ...	3·30		2·10	1·65	3·60	— ·63	2·20	2·42	— ·74	·79
May ..	1·29		2·10	2·45	2·00	2·32	2·20	—1·20	2·06	1·78
June ...	—1·06		— ·40	— ·68	2·40	·82	— ·50	2·45	1·62	1·61
July ...	3·13		2·70	2·49	3·90	2·46	2·60	4·41	1·58	3·90
August.	4·48		4·80	+4·21	5·90	+5·25	+5·50	+6·79	+5 37	+6·10
Sept. ...	6·41		4·00	3·73	9·00	1·90	1·80	3·34	2·44	1·80
Oct. ...	7·39		+5·20	4·20	+12·40	2·32	3·20	5·72	3·21	2·29
Nov. ..	+7·86		3·20	3·24	8·20	2·47	3·10	2 56	3·74	2·98
Dec. ...	4·30		2·00	2·10	7·30	2·07	2·40	1·42	2·85	2·85
Totals..	50·23	...	33·40	30·93	71·60	23·58	28·80	38·08	28·17	29·48

No station in this county.

MONTHLY RAINFALL IN 1874—(*continued*).

SCOTLAND (*continued*). IRELAND.

Division ..	XVII.	XVIII.				XIX.				XX.
County....	Nairn	W. Ross	E.Ross	Inverness (west)	Inverness (east)	Sutherland	Caithness	Orkney	Shetland	Cork
Station....	Nairn	Duncraig	Dingwall	Loch Nevis	Farraline	Lairg	Wick	Balfour Castle	Bressay Manse	Fermoy.
Ft. abv. sea	47	124	...	14	700	..	70	50	10	114
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
January	2·18	8·58	3·73	12·00	5·00	4·84	2·11	+5·00	5·20	2·46
Feb. ...	— ·35	1·88	— ·34	2·70	2·50	— ·78	— ·58	1·20	2·50	+5·43
March..	2·20	5·56	1·76	11·00	4·00	3·34	1·92	2·70	3·20	1·68
April ..	·71	4·44	2·18	9·10	2·00	1·89	1·26	1·00	3·40	2·21
May ..	1·81	2·53	1·73	— 1·10	2·00	3·59	1·06	— ·60	1·50	— ·98
June ..	1·23	1·48	1·37	3·40	1·70	3·51	1·00	·80	2·30	1·01
July ...	1·78	— ·49	2·21	4·70	3·00	3·70	1·73	1·90	—1·00	2·11
August.	+5·62	4·14	3·93	8·20	+6·10	4·43	+3·03	2·50	3·70	2·29
Sept. ...	2·27	+10·45	2·34	13·50	3·20	2·91	2·91	4·60	4·20	3·93
October.	2·29	8·45	+3·96	+14·30	5·20	4·75	2·91	3·70	+5·40	4·08
Nov. ...	1·92	2·56	2·92	6·20	2·60	+5·69	2·00	3·50	2·30	4·71
Dec. ...	1·23	1·97	1·35	4·60	— ·90	4·91	2·69	3·20	3·20	4·91
Totals ..	23·59	52·53	27·82	90·80	38·20	44·34	23·20	30·70	37·90	35·80

IRELAND (*continued*).

Division ..	XX.			XXI.						
County. ..	Kerry	Tipperary	Clare	Wexford	Kilkenny	Carlow	King's County	Wicklow	Dublin	Westmeath
Station....	Darrynane Abbey	Clonmel	Killaloe	Courtown	Stoneyford	Carlow	Rathangan	Bray	Balbriggan	Athlone
Ft. abv. sea	12	80	123	80	220	291	224	250	57	188
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in
January	5·27	3·52	4·35	2·79	2·45	2·87	2·45	2·56	2·28	2·79
Feb. ...	5·54	4·64	2·43	3·39	2·37	2·87	1·85	3·67	2·11	2·01
March..	3·20	1·45	3·25	— ·90	— ·87	—1·18	1·59	1·23	1·16	1·92
April ...	3·26	2·24	3·46	2·05	1·71	2·22	2·02	1·57	1·68	2·21
May ...	—1·20	·74	1·60	1·44	1·31	2·08	1·52	1·70	1·48	1·76
June ...	2·34	1·41	1·48	1·70	1·67	1·48	— ·98	— ·89	— ·77	—1·50
July ...	4·13	2·18	3·47	2·05	2·63	1·72	3·42	1·21	1·80	2·97
August.	4·41	4·27	7·84	3·91	2·68	4·24	+4·89	+4·81	4·17	4·60
Sept. ...	5·19	3·92	5·14	2·07	2·98	3·26	3·35	1·96	2·43	4·52
Oct. ...	6·44	5·72	...	4·62	+4·66	+5·04	3·87	3·60	3·87	+5·03
Nov. ...	5·28	3·88	4·24	4·16	2·94	3·18	2·43	4·31	4·73	4·17
Dec. ...	+8·17	4·13	7·94	+4·64	3·53	3·76	3·61	3·97	+4·85	4·44
Totals ..	54·43	38·10	...	33·72	29·80	33·90	31·98	31·48	31 33	37·92

MONTHLY RAINFALL IN 1874—*(continued.)*

IRELAND *(continued)*.

Division ..	XXII.			XXIII.						
County....	Galway	Roscommon	Sligo	Cavan	Armagh	Down	Antrim	Londonderry	Tyrone	Donegal
Station ..	Cregg Park	Holywell	Mount Shannon	Red Hills	Armagh Obs.	Seaford	Belfast	Londonderry	Omagh	Dunglow
Ft. abv. sea	130	...	70	208	206	180	68	80	275	10
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
January	3·26	2·70	4·35	2·38	1·70	2·03	1·88	3·63	2·07	4·05
Feb. ..	2·37	—1·10	2·40	1·63	1·64	1·90	2·50	1·70	—1·32	2·00
March..	2·15	3·00	2·45	2·09	1·05	1·51	1·69	2·80	2·81	3·89
April ...	2·76	1·54	3·46	2·56	2·60	1·68	1·39	2·85	2·45	—1·61
May ..	—1·59	2·25	1·78	1·38	1·12	— ·97	—1·02	2·60	1·93	2·20
June ...	2·16	1·79	—1·58	—1·28	— ·86	1·38	1·10	—1·42	3·18	1·64
July ...	3·72	2·60	3·80	2·42	3·24	2·42	2·93	3·90	2·86	3·21
August.	+6·79	3·00	4·89	+4·48	+3·78	4·27	+5·04	4·60	3·26	6·00
Sept. ...	6·48	3·72	5·81	3·30	3·25	2·46	3·90	5·70	+4·33	5·19
October.	6·45	2·57	4·95	4·43	3·56	4·43	5·01	+6·20	3·82	+7·05
Nov.. ..	3·66	+3·87	4·26	3·01	3·09	+5·32	4·92	4·35	3·19	4·25
Dec.....	4·95	3·40	+5·83	3·19	2·84	3·83	3·40	5·10	4·28	4·62
Totals..	46·34	31·54	45·56	32·15	28·73	32·20	34·78	44·85	35·50	45·71

MONTHLY PER-CENTAGE OF RAIN IN 1874.

ENGLAND.

Month.	Middlesex.	Surrey.	Kent.	Sussex.	Hampshire.	Berks.	Herts.	Bucks.	Oxford.	Northampton.	Hunts.	Bedford.	Cambridge.	Essex.	Suffolk.	Norfolk.
Jan...	6	5	7	7	8	11	8	9	11	9	7	8	7	5	6	7
Feb...	5	9	3	7	5	12	7	10	8	8	6	7	5	4	6	4
Mar..	2	2	4	3	3	3	3	3	3	4	3	4	6	2	4	6
April.	7	9	11	8	9	6	8	9	6	5	5	6	6	7	9	5
May..	6	2	3	2	3	4	5	3	7	7	8	7	8	9	5	4
June.	11	12	8	11	9	5	9	6	3	3	9	3	8	10	7	9
July..	4	5	7	6	2	4	7	4	2	4	5	8	7	7	4	5
Aug..	7	8	12	9	6	8	6	6	8	9	15	7	11	6	5	10
Sept.	14	11	16	12	14	14	15	16	16	17	13	18	14	10	18	14
Oct...	18	18	11	16	18	16	12	15	15	14	11	9	7	21	10	8
Nov..	12	11	8	10	12	9	11	11	12	10	10	12	11	10	15	14
Dec..	8	8	10	9	11	8	9	8	9	10	8	11	10	9	11	14

ENGLAND—(*continued.*)

Month.	Wilts.	Dorset.	Devon.	Cornwall.	Somerset.	Gloucester.	Hereford.	Salop.	Stafford.	Worcester.	Warwick.	Leicester.	Rutland.	Lincoln.	Notts.	Derby.
Jan....	9	9	11	11	10	13	11	9	10	8	12	9	9	7	7	11
Feb....	10	8	10	8	11	8	10	10	9	11	8	8	9	10	9	7
Mar...	3	2	2	4	2	5	3	5	5	4	5	5	6	5	4	10
April.	7	7	7	5	6	6	6	4	5	6	6	4	5	5	8	5
May..	3	2	3	1	3	2	5	7	5	8	7	2	4	5	6	4
June..	5	5	3	4	5	3	4	1	3	7	2	8	3	3	2	2
July..	3	3	3	3	3	3	3	4	5	5	6	9	3	4	9	6
Aug...	9	9	8	9	7	11	10	13	12	9	10	10	11	13	9	13
Sept..	11	12	14	15	21	17	16	15	11	12	14	15	13	9	10	8
Oct...	18	19	16	10	13	12	12	11	9	9	12	11	12	12	11	10
Nov..	10	11	10	11	7	8	10	12	15	11	10	13	14	13	14	15
Dec...	12	13	13	19	12	12	10	9	11	10	8	10	11	14	11	9

MONTHLY PER-CENTAGE OF RAIN IN 1874.

ENGLAND—(*continued.*) WALES.

Month.	Cheshire.	Lancashire.	Yorks, W.R.	Yorks, E.R.	Yorks, N.R.	Durham.	Northumberland	Cumberland.	Westmoreland.	Monmouth.	Glamorgan.	Carmarthen.	Pembroke.	Cardigan.	Brecon.	Radnor.
Jan...	9	11	7	5	9	7	9	11	12	14	14	12	11	10	12	11
Feb...	7	5	6	6	7	5	5	7	6	10	6	9	9	6	10	8
Mar..	8	13	9	7	2	5	10	7	8	4	7	7	5	8	7	6
April	5	6	5	7	5	5	7	5	4	7	4	5	5	4	10	3
May..	5	5	5	9	9	14	5	2	2	1	4	1	2	3	2	3
June.	2	1	2	3	4	5	4	2	2	3	5	3	4	3	5	1
July..	8	9	13	6	7	5	6	4	5	3	3	4	4	7	2	5
Aug..	13	15	9	10	11	10	12	13	13	10	13	13	13	17	9	15
Sept..	12	9	10	6	12	7	10	14	10	18	13	14	11	10	14	10
Oct...	11	11	9	9	12	7	12	20	23	12	12	12	11	9	11	13
Nov..	10	9	12	17	4	13	12	10	8	7	7	8	11	11	8	11
Dec..	10	6	13	15	18	17	8	5	7	11	12	12	14	12	10	14

WALES—(*continued.*) SCOTLAND.

Month.	Montgomery.	Flint.	Denbigh.	Merioneth.	Carnarvon.	Wigton.	Kirkcudbright.	Dumfries.	Roxburgh.	Selkirk.	Peebles.	Berwick.	Haddington.	Edinburgh.	Linlithgow.	Lanark.
Jan...	11	6	8	9	8	10	12	11	12	9	9	4	4	7	12	9
Feb...	7	5	6	9	6	5	5	6	8	5	5	6	2	3	3	4
Mar..	11	5	3	7	7	7	5	7	8	7	7	6	4	7	8	6
April	2	4	6	5	4	4	6	7	6	5	7	4	2	3	8	5
May..	7	10	6	2	3	2	2	1	3	3	4	6	5	6	4	4
June.	3	2	2	3	3	3	3	1	3	4	3	5	5	6	4	2
July..	8	11	7	7	7	7	6	8	5	5	7	12	17	13	9	9
Aug..	13	9	12	14	15	14	12	12	11	15	12	14	17	19	18	17
Sept.	9	7	10	8	10	7	10	12	9	8	8	6	8	7	9	12
Oct...	10	13	12	13	14	18	23	21	21	19	15	9	8	9	14	16
Nov..	7	14	15	13	13	13	11	10	10	11	14	15	17	12	8	10
Dec...	12	14	13	10	10	10	5	4	4	9	9	13	11	8	3	6

MONTHLY PER-CENTAGE OF RAIN IN 1874.

SCOTLAND—(*continued.*)

Month.	Ayr.	Renfrew.	Dumbarton.	Stirling.	Bute.	Argyll (Mainland).	Argyll (Insular).	Clackmannan.	Kinross.	Fife.	Perth.	Forfar.	Kincardine.	Aberdeen.	Banff.	Elgin.
Jan...	14	12	13	10	9	11	9	No station in this county.	10	10	12	8	8	8	5	7
Feb...	5	3	3	2	3	4	6		3	3	2	3	4	7	5	9
Mar..	9	9	12	7	8	11	7		7	7	10	4	6	6	6	3
April	5	6	7	6	6	6	6		6	5	5	3	8	6	3	6
May..	2	5	3	5	5	4	3		6	8	3	10	8	3	7	5
June.	4	2	2	4	2	4	2		1	2	3	3	2	6	6	3
July..	7	5	6	19	6	8	6		8	8	5	10	9	11	6	11
Aug..	10	9	8	9	12	12	9		15	14	8	22	19	18	19	20
Sept..	11	11	13	8	10	14	13		12	12	13	8	6	9	9	8
Oct...	17	21	17	16	18	16	14		16	14	17	10	11	15	11	9
Nov..	12	9	12	9	14	6	16		10	10	12	10	11	7	13	10
Dec..	4	8	4	5	7	4	9		6	7	10	9	8	4	10	1

SCOTLAND—(*continued.*) IRELAND.

Month.	Nairn.	Ross, W.	Ross, E.	Inverness, W.	Inverness, E.	Sutherland.	Caithness.	Orkney.	Shetland.	Cork.	Kerry.	Tipperary.	Clare.	Wexford.	Kilkenny.
Jan...	9	16	13	13	13	11	9	16	14	7	10	9		8	8
Feb...	1	4	1	3	7	2	3	4	7	15	10	12		10	8
Mar..	9	11	6	12	11	7	8	9	8	5	6	4		3	3
April.	3	8	8	10	5	4	5	3	9	6	6	6		6	6
May..	8	5	6	1	5	8	5	2	4	3	2	2		4	4
June..	5	3	5	4	4	8	4	3	6	3	4	4		5	5
July..	8	1	8	5	8	8	7	6	3	6	8	6		6	9
Aug..	24	8	14	9	16	10	13	8	10	6	8	11		12	9
Sept..	10	19	9	15	8	7	12	15	11	11	9	10		6	10
Oct...	10	16	14	16	14	11	13	12	14	11	12	15		14	16
Nov..	8	5	11	7	7	13	9	11	6	13	10	10		12	10
Dec...	5	4	5	5	2	11	12	11	8	14	15	11		14	12

MONTHLY PER-CENTAGE OF RAIN IN 1874.

IRELAND—(*continued.*)

Month.	Carlow.	King's Co.	Wicklow	Dublin	Westmeath.	Galway.	Roscommon,	Sligo.	Cavan.	Armagh.	Down.	Antrim.	Londonderry	Tyrone.	Donegal.
Jan...	9	8	8	7	7	7	8	10	7	6	6	5	8	6	9
Feb...	9	6	12	7	5	5	3	5	5	6	6	7	4	4	4
Mar..	4	5	4	4	5	5	10	5	7	4	5	5	6	8	9
April	7	6	5	5	6	6	5	8	8	9	5	4	6	7	4
May..	6	5	5	5	5	3	7	4	4	4	3	3	6	5	5
June.	4	3	3	3	4	5	6	3	4	3	4	3	3	9	4
July.	5	11	4	6	8	8	8	8	8	11	8	8	9	8	7
Aug..	12	15	15	13	12	14	10	11	14	13	13	15	10	9	13
Sept.	9	10	6	8	12	14	12	13	10	11	8	11	13	12	11
Oct...	15	12	11	12	13	14	8	11	14	12	14	15	14	11	15
Nov..	9	8	14	15	11	8	12	9	9	11	16	14	10	9	9
Dec..	11	11	13	15	12	11	11	13	10	10	12	10	11	12	10

ABSTRACT.

Month.	Mean per-centage in each month.					Highest per-centage, and Counties in which it occurred.	Lowest per centage, and Counties in which it occurred.
	Engl'nd	Wales.	Scotl'nd	Ireland.	British Isles.		
January.	9	10	10	8	9·3	16 W. Ross, Orkney	4 Berwick, Haddington.
February	7	8	4	7	6·5	15 Cork	1 Nairn, E. Ross.
March ...	5	6	8	5	6·0	13 Lancashire	2 Middlesex, Surrey, Essex, Dorset, Devon, Somerset, Yorks N.R.
April ...	6	5	5	6	5·5	11 Kent	2 Montgomery, Haddington.
May.....	5	4	5	4	4·5	14 Durham	1 Cornwall, Monmouth, Carmarthen, Dumfries, Inverness W.
June.....	5	3	4	4	4·0	12 Surrey	1 Salop, Lancashire, Radnor, Dumfries, Kinross.
July.....	5	6	8	8	6·8	19 Stirling	1 W. Ross.
August...	10	13	14	12	12·2	24 Nairn	5 Suffolk.
Sept.....	13	11	10	10	11·0	21 Somerset	6 Yorks E.R., Berwick, Kincardine, Elgin, Wexford, Wicklow.
Oct.	13	12	15	13	13·2	23 Westmoreland, Kircudbright	7 Durham.
Nov.....	11	10	10	11	10·5	17 Yorks E.R., Haddington	4 Yorks N.R.
D c.....	11	12	7	12	10·5	19 Cornwall	2 Inverness E.

ON THE RAINFALL OF THE BRITISH ISLES DURING THE YEAR 1874.

We have discussed this question in duplicate in order to avoid risk of error, firstly, in the usual way by compiling the tables on pages 154 and 155, and, secondly, by working out the per-centages of, and mapping, about 300 returns from stations of which the records are perfect for the period 1860-9. The two methods have given almost identical results and, therefore, presumably there can be no doubt of the accuracy of the conclusions arrived at.

As the results come out in somewhat different forms, we take the two processes separately.

The comparison table shows that with the exception of Devon and Cornwall, and of Lancashire and one station in Yorkshire and one in Cumberland, the rainfall over the whole of England has been below the average. At Pode Hole, near Spalding, the fall has not been two-thirds of the average, and at London and Uckfield, there has been a deficiency of a fourth and a fifth respectively. The Camden-square return looks rather doubtful; but it appears to be sufficiently supported by the following data, from the four nearest stations, all within one-and-a-half miles of that station.

Royal Botanic Gardens	20·78
Rochester Square	19·50
Camden Square.....	18·82
Compton Terrace	18·79
Kentish Town	18·53

These returns are ranged in the usual order of the positions of the stations, from S. to N., and thus some light seems to be thrown upon the variation in a small distance.

The Scotch returns agree better than usual, and with few exceptions, show (as was the case south of the Tweed) an excess on the West, and

a deficiency on the east coast, the latter greater than the former. It is not easy to speak decisively respecting the facts in Ireland; our readers must draw their own conclusions. To add to the general difficulty of deciding upon limited data, there is a special enigma at the very valuable old-established station at Black Rock, Dublin. Noticing the remarkable excess reported from that station, we applied to the observer for an explanation, and the following is his reply :—

ROCKVILLE, BLACK ROCK,
February 12th, 1875.

DEAR SIR,

I am not in the least surprised at your letter inquiring as to the extraordinary quantity of rain registered by me during the latter part of last year. I quite expected it.

I can only account for it by the exceedingly partial character of the falls—often excessively heavy here, with little or none a short way off. This occurred over and over again during the last three months of the year, and the state of my grounds fully justifies the record.

Nevertheless, finding my registry largely exceeding those around me, I thought, more than once, that something must be wrong with the gauge. I had it carefully examined several times, by one of my sons—an engineer—and he uniformly reported it as all right. Its position has not been altered for the last 25 years, and I have no reason whatever to think that there is anything wrong with it.

I regret to say that early in October I had a severe attack in the chest, and my breathing was so much affected that I was unable to lie down for many weeks, being obliged to sit upright, awake all night. The measuring apparatus of the rain gauge is in my bedroom, and during many a sleepless night I amused myself listening to the dropping of the rain into it, often with my watch in my hand, reckoning the number of drops per minute! I always found the quantity registered to accord with the character of the rain I heard outside. The same remark applies to the rain in the daytime.

I do not know if these explanations will be satisfactory to you, but extraordinary as the fall appears to be, especially in December, I have no reason to think that there has been anything wrong in the gauge.

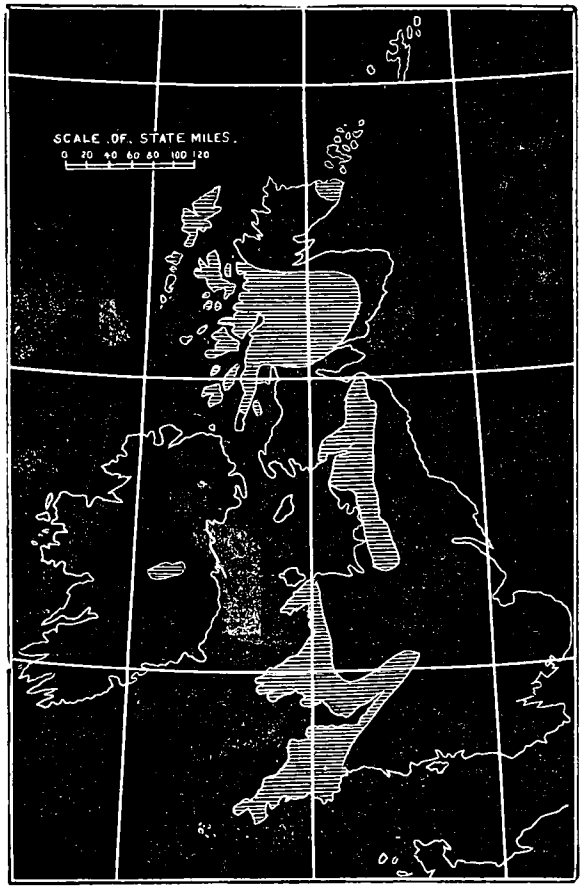
Very truly yours,
THOMAS BEWLEY.

The abstract shows that in England, Wales, and Scotland, there has been about 6 per cent. less than the average rainfall; in Ireland, if we accept the Black Rock return, the fall has been just the average; if we reject it, then the fall has been about 10 per cent. below it.

Taking the whole of the British Isles the deficiency was 4 per cent.

The results of the other investigation are epitomized in the following rough sketch, in which the shaded portions are those where the fall was above the 1860 to 1869 average. It will be seen that it con

firms generally the results deduced from the comparison table, and it is only necessary to add that the extensive data on which it is based



enable us to state that the great deficiency indicated by the first method as having prevailed near Spalding, is by the second shown to have been greater there, than at any other station, but a deficiency of 25 per cent. appears to have prevailed from Nottingham to Bury St. Edmunds.

COMPARISON OF THE RAINFALL IN 1874 WITH THE AVERAGE OF PREVIOUS YEARS.

ENGLAND AND WALES.

Div.	STATION.	COUNTY.	Average			Depth in 1874.	Difference from Average, 1860-5	
			1850-9.	1860-9.	1860-5.		Amount.	Per cent
			in.	in.	in.	in.	in.	
I.	Camden Square	Middlesex	(24·30)	25·68	25·01	18·82	6·19 —	25
II.	Chichester (Shopwyke)	Sussex	26·25	29·19	28·41	27·13	1·28 —	5
,,	,, (Chilgrove)	,,	32·23	33·22	32·77	29·01	3·76 —	11
,,	,, (W. Dean)	,,	35·30	37·08	37·02	31·53	5·49 —	15
,,	Uckfield Observatory	,,	30·03	31·24	31·50	24·65	6·85 —	22
,,	Ventnor, Isle of Wight	Hants	28·46	(29·07)	29·26	24·79	4·47 —	15
III.	Hemelhempstead	Herts	26·43	26·39	25·47	21·63	3·84 —	15
,,	Berkhempstead	,,	28·05	29·28	28·02	25·24	2·78 —	10
,,	Hitchin	,,	24·72	23·92	23·25	20·25	3·00 —	13
,,	High Wycombe	Bucks	23·20	25·71	24·29	23·05	1·24 —	5
,,	Althorp	Northants	20·34	23·35	21·77	20·57	1·20 —	6
,,	Cardington (8 in. gauge)	Bedford	21·60	22·49	21·87	18·63	3·24 —	15
IV.	Witham	Essex	20·55	20·47	20·73	18·02	2·71 —	13
,,	Norwich (Honingham)	Norfolk	25·99	23·98	23·28	19·97	3·31 —	14
,,	Holkham	,,	26·13	23·88	23·10	19·60	3·50 —	15
V.	Plymouth (Ham)	Devon	44·70	42·89	42·17	43·47	1·30 +	3
,,	Exeter Institution	,,	26·91	31·76	30·17	34·74	4·57 +	15
,,	Helston	Cornwall	36·22	37·87	38·05	43·41	5·36 +	14
,,	Bodmin	,,	43·48	47·71	46·12	48·16	2·04 +	4
VI.	Burford	Shropshire	25·52	26·74	26·25	23·28	2·97 —	11
,,	Shiffnal (Haughton Hall)	,,	24·02	24·87	23·74	23·50	·24 —	1
,,	Orleton	Worcester	28·82	30·90	30·06	26·74	3·32 —	11
VII.	Spalding, (Pode Hole)	Lincoln	23·38	25·34	25·11	16·22	8·89 —	35
,,	Welbeck	Notts	23·29	24·64	24·02	22·21	1·81 —	8
,,	Derby	Derby	23·98	26·81	25·14	21·35	3·79 —	15
VIII.	Bolton (The Folds)	Lancashire	44·01	48·98	48·33	48·67	·34 +	1
,,	,, (Belmont)	,,	51·19	56·61	55·70	65·20	9·50 +	17
,,	Ormskirk (Rufford)	,,	33·24	35·00	34·81	33·85	·96 —	3
,,	Stonyhurst	,,	43·40	48·56	49·08	51·20	2·12 +	4
,,	Holker	,,	39·17	45·63	44·98	45·09	·11 +	0
IX.	Rednires	York, W.R.	37·86	39·68	37·89	32·21	5·68 —	15
,,	Standedge	,,	49·58	53·70	52·17	50·25	1·92 —	4
,,	Leeds (Holbeck, M. & Co.)	,,	20·91	22·85	21·98	20·18	1·80 —	8
,,	York	,,	22·02	24·48	23·38	24·73	1·35 +	6
X.	Seathwaite	Cumberland	126·98	154·05	153·47	148·79	4·68 —	3
,,	Keswick (Post Office)	,,	55·01	62·40	60·56	69·03	8·47 +	14
XI.	Holywell (Maes-y-dre)	Flint	24·25	24·43	23·58	22·33	1·25 —	5
,,	Guernsey	Channel Isds.	34·46	37·18	37·09	35·38	1·71 —	5

COMPARISON OF THE RAINFALL IN 1874 WITH THE AVERAGE OF PREVIOUS YEARS.

SCOTLAND.

Div.	STATION.	COUNTY.	Average 1850-9.	Average 1860-9.	Average 1860-65.	Depth in 1874.	Difference from Average, 1860-5 Amount.	Per cent
			in.	in.	in.	in.	in.	
XII.	Mull of Galloway	Wigtown	22·52	27·66	28·31	22·52	5·79 —	20
,,	Little Ross	Kirk'udbright	25·27	26·98	27·35	27·94	·59 +	2
XIII.	Haddington	Haddington. .	24·35	25·63	26·93	23·44	3·49 —	13
,,	Glencorse	Edinburgh	36·96	37·45	36·77	35·85	·92 —	3
,,	Inveresk	,,	24·72	29·02	30·05	26·27	3·78 —	13
XIV.	Bothwell Castle	Lanark	27·76	28·89	28·33	32·66	4·33 +	15
,,	Cessnock Park	,,	34·01	37·96	37·98	38·72	·74 +	2
,,	Largs (Mansfield)	Ayr	43·06	48·92	48·63	42·50	6·13 —	13
,,	Waulk Glen	Renfrew	43·94	49·85	48·96	48·35	·61 —	1
XV.	Arddaroch	Dumbarton. .	66·55	78·32	75·83	84·22	8·39 +	11
,,	Pladda	Bute	35·23	40·14	38·12	40·63	2·51 +	7
,,	Mull of Cantyre	Argyll	41·19	44·17	44·61	36·14	8·47 —	19
,,	Rhinns of Islay	,,	30·58	33·43	32·66	34·36	1·70 +	5
,,	Castle Toward	,,	47·88	54·55	53·80	49·59	4·21 —	8
,,	Tyree (Hynish)	,,	73·90	79·99	84·77	68·86	15·91 —	18
,,	Lismore	,,	38·44	46·22	46·95	46·16	·79 —	2
,,	Ardnamurchan	,,	38·50	45·59	47·94	53·44	5·50 +	11
XVI.	Dundee (Hill Head)	Forfar	31·06	35·19	35·59	36·65	1·06 +	3
,,	,, (Craigton)	,,	31·87	34·88	35·64	39·89	4·25 +	12
,,	Arbroath	,,	25·08	29·05	29·71	22·92	6·79 —	23
XVII.	Girdleness [Aberdeen]	Kincardine	19·71	22·72	22·13	18·48	3·65 —	17
,,	Buchanness	Aberdeen	23·40	25·59	22·51	21·73	·78 —	3
XVIII	Cromarty	Cromarty	23·67	25·94	27·80	16·93	10·87 —	39
,,	Barrahead	Inverness W.	32·67	31·73	32·62	30·82	1·80 —	6
,,	Culloden	Inverness, E.	22·70	27·08	26·86	25·31	1·55 —	6
XIX	Cape Wrath	Sutherland	36·94	39·37	39·59	38·18	1·41 —	4
,,	Noss Head	Caithness	25·57	24·70	23·57	27·37	3·80 +	15
,,	Pentland Skerries	,,	24·12	28·76	28·92	25·83	3·09 —	11
,,	Sandwick	Orkney	36·14	38·85	36·79	38·26	1·47 +	4
,,	Bressay Manse	Shetland	36·22	40·31	40·40	37·90	2·50 —	6

IRELAND.

XX.	Cork	Cork	34·23	34·77	34·41	29·37	5·04 —	15
XXI.	Portarlington	King'sCounty	26·94	36·86	41·38	29·02	12·36 —	30
,,	Tullamore	,, ,,	24·37	27·94	28·09	28·52	·43 +	2
,,	Woodstock	Kilkenny	36·35	39·38	38·83	39·67	·84 +	2
,,	Black Rock	Dublin	21·78	27·10	25·83	39·18	13·35 +	52
XXIII	Armagh	Armagh	(28·20)	32·01	32·40	28·73	3·67 —	11

ABSTRACT.

England	33·58	36·26	35·52	34·02	1·50 —	6
Scotland	34·13	37·96	38·00	36·40	1·60 —	5
Ireland	28·65	33·01	33·49	32·42	1·07 —	0
Mean of the whole	32·12	35·74	35·67	34·28	1·39 —	4

EXTREMES OF RAINFALL IN 1874.

ENGLAND.

Greatest.			Least.		
Div.		in.	Div.		in.
X.	Seathwaite	148·79	III.	Chatteris (Horseway Lock)	12·85
,,	Kirkstone Pass	115·33	IV.	Shoeburyness	14·20
,,	Helvellyn (Birkside)	111·00	III.	Cambridge (Cherryhinton)	14·26
,,	Patterdale (Greenside Mines)	108·92	,,	Ely, (Stretham)	14·70
,,	Grasmere (Easedale Tarn)	107·75	VII.	Stockwith	14·94
,,	Little Langdale (Bridgend)	107·53	IV.	Ipswich (Bishop's Hill)	14·97

WALES.

Greatest.			Least.		
Div.		in.	Div.		in.
XI.	Pen-y-gwryd	149·00	XI.	Holywell (Maes-y-dre)	22·33
,,	Beddgelert (Bryn Gwynant)	121·58	,,	Rosset (Trevalyn Hall)	23·40
,,	Rhiwbrifdir	116·56	,,	Prestatyn (Nant)	25·08
,,	Aberdare (Treherbert)	94·61	,,	Llandudno (Gt. Orme's Hd.)	27·17
,,	Dolgelly (Brithdir)	76·42	,,	Sark	27·58
,,	,, (National School)	74·60	,,	St. Asaph (Nantllys)	27·96

SCOTLAND.

Greatest.			Least.		
Div.		in.	Div.		in.
XVIII.	Loch Shiel (Glenfinnan)	123·96	XVII.	Nairn (Acharéidh)	20·24
XVI.	Perth (Logiealmond Lodge)	112·50	,,	Burghead (H.R.S.)	21·32
XVIII.	Isle of Skye (Kyle Akin)	107·10	XIII.	North Berwick (Seacliff)	21·34
XVI.	Glen Gyle	106·60	,,	Milne Graden	22·45
XVIII.	Isle of Skye (Dunvegan)	103·97	XVI.	Balfour	22·65
,,	,, ,, (Oronsay)	101·15	,,	Arbroath	22·92

IRELAND.

Greatest.			Least.		
Div		in.	Div.		in.
XX.	Kenmare (Dromore)	63·11	XXI.	Dublin (Eccles St.)	26·20
,,	Killarney (Killarney Ho.)	62·61	,,	,, (Glasnevin)	26·29
XXIII.	Letterkenny (Glendoen)	56·19	,,	,, (Fitzwilliam Square)	27·19
XXII.	Crossmolina (Enniscoe)	55·15	,,	Monkstown (Easton Lodge)	28·06
XX.	Darrynane Abbey	54·43	XXIII.	Banbridge (Milltown)	28·50
XXII.	Galway (Queen's College)	51·84	XXI.	Tullamore	28·52

GENERAL TABLES

OF

TOTAL RAINFALL IN 1874,

AT ABOUT

1700 STATIONS

IN THE

BRITISH ISLES.

SUGGESTIONS

FOR SECURING UNIFORMITY OF PRACTICE AMONG RAINFALL OBSERVERS.

N.B. New Rules are printed in this type.

I.—SITE.—A rain gauge should not be set on a slope or terrace, but on a level piece of ground, at a distance from shrubs, trees, walls, and buildings—at the very least, as many feet from their base as they are in height. Tall-growing flowers, vegetables, and bushes must be kept away from the gauge. If a thoroughly clear site cannot be obtained, shelter is most endurable from N.W., N., and E., less so from S., S.E., and W., and not at all from S.W. or N.E.

II.—OLD GAUGES.—Old established gauges should not be moved, nor their registration discontinued until, at least, two years after a new one has been in operation, otherwise the continuity of the register will be irreparably destroyed. Both the old and the new ones must be registered at the same time and the results recorded for comparison.

III.—LEVEL.—The funnel of a rain gauge must be set quite level, and so firmly fixed, that it will remain so in spite of any gale of wind or ordinary circumstance. Its correctness in this respect should be tested from time to time.

IV.—HEIGHT.—The funnel of gauges newly placed should be 1 ft. above grass. Information respecting height above sea level may be obtained from the Editor.

V.—RUST.—If the funnel of a japanned gauge becomes so oxidised as to retain the rain in its pores, or threatens to become rusty, it should have a coat of gas tar, or japan black, or a fresh funnel of zinc or copper should be provided.

VI.—FLOAT GAUGES.—If the measuring rod is detached from the float, it should never be left in the gauge. If it is attached to the float, it should be pegged or tied down, and only allowed to rise to its proper position at the time of reading. To allow for the weight

of the float and rod, these gauges are generally so constructed as to show 0 only when a small amount of water is left in them. Care must always be taken to set the rod to the zero or 0.

VII.—Can and Bottle Gauges.—The measuring glass should always be held upright; the reading is to be taken midway between the two apparent surfaces of the water.

VIII.—Time of Reading.—Nine a.m. daily; if taken only monthly, then 9 a.m. on 1st.

IX.—Date of Entry.—The amount measured at 9 a.m. on any day is to be set against the previous one; because the amount registered at 9 a.m. of, say, 17th contains the fall during 15 hours of the 16th, and only 9 hours of the 17th. *(This rule has been approved by the Meteorological Societies of England and Scotland, cannot be altered, and is particularly commended to the notice of observers.)*

X.—Mode of Entry.—If less than one-tenth (·10) has fallen, the cypher must *always* be prefixed; thus, if the measure is full up to the seventh line, it must be entered as ·07, that is, no inches, no tenths, and seven hundredths. For the sake of clearness, it has been found necessary to lay down an invariable rule that there shall always be two figures to the right of the decimal point. If there be only one figure, as in the case of one-tenth of an inch (usually written ·1) a cypher must be added, making it ·10. Neglect of this rule causes much inconvenience. All columns should be cast *twice*—once up and once down, so as to avoid the same error being made twice. When there is no rain, a line should be drawn rather than cyphers inserted.

XI.—Caution.—The amount should always be written down before the water is thrown away.

XII.—Small Quantities.—The unit of measurement being ·01, observers whose gauges are sufficiently delicate to show less than that, are, if the amount is under ·005, to throw it away, if it is ·005 to ·010 inclusive, they are to enter it as ·01.

XII.—Absence.—Every observer should train some one as an assistant; but where this is not possible, instructions should be given that the gauge should be emptied at 9 a.m. on the 1st of the month, and the water bottled, labelled, and tightly corked, to await the observer's return.

XIV.—Heavy Rains.—When very heavy rains occur, it is desirable to measure immediately on their termination, and it will be found a safe plan after measuring to return the water to the gauge, so

that the morning registration will not be interfered with. Of course if there is the slightest doubt as to the gauge holding all that falls, it must be emptied, the amount being *previously* written down.

XV.—Snow.—In snow three methods may be adopted—it is well to try them all. (1) Melt what is caught in the funnel by adding to the snow a previously ascertained quantity of warm water, and then deducting this quantity from the total measurement, enter the residue as rain. (2) Select a place where the snow has not drifted, invert the funnel, and turning it round, lift and melt what is enclosed. (3) Measure with a rule the average depth of snow, and take one twelfth as the equivalent of water. Some observers use in snowy weather a cylinder of the same diameter as the rain gauge, and of considerable depth. If the wind is at all rough, all the snow is blown out of a flat-funnelled rain gauge.

XVI.—Overflow.—It would seem needless to caution observers on this head, but as a recent foreign table contains *six instances on one day* in which gauges were allowed to run over, it is evidently necessary that British observers should be on the alert. It is not desirable to purchase any new gauge of which the capacity is less than four inches.

XVII. Second Gauges.—It is often desirable that observers should have two gauges, and that one of them should be capable of holding eight inches of rain. One of the gauges should be registered daily, the other weekly or monthly as preferred, but always on the 1st of each month. By this means a thorough check is kept on accidental errors in the entries, which is not the case if *both* are read daily.

XVIII.—Dew and Fog.—Small amounts of water are at times deposited in rain gauges by fog and dew, they should be added to the amount of rainfall, because (1) they "tend to water the earth and nourish the streams; and not for that reason only, but (2) because in many cases the rain gauges can only be visited monthly, and it would then obviously be impossible to separate the yield of snow, rain, &c.; therefore, for the sake of uniformity, all must be taken together."

XIX.—Doubtful Entries.—Whenever there is the least doubt respecting the accuracy of any observation, the entry should be marked with a ?, and the reason stated for its being placed there.

ARRANGEMENT OF GENERAL TABLES.

The divisions are the same as those adopted by the Registrars General of England and Scotland.

The boundaries of these divisions are shown on the map facing page 147 of *British Rainfall*, 1872.

The counties follow the same order as in the reports of the beforementioned officers.

An alphabetical list of the counties is given, with the page or pages on which all returns from each will be found.

The stations in each county are arranged in the order of their latitude from South to North.

In order to facilitate finding the fall in any part of the country, the first name is almost always that of a place given in *Bradshaw*, the *British Postal Guide*, or the *Clergy List;* the second name is added occasionally to fix accurately the site of Observation. In a very few instances, this second name is in [ ] instead of ( ); it then shows that the nearest town is in an adjoining county. For instance, "Lowestoft (Gisleham)" means Gisleham, near Lowestoft, both being in one county, but "Geldeston [Beccles]" means Geldeston, Norfolk, near Beccles, in another county—Suffolk.

The contents of the columns are sufficiently explained by the headings, except that in the column headed "diameter" figures will occasionally be noticed of a different type from the rest of the tables; these figures indicate the length of the sides of rectangular mouthed gauges. These measurements are all in inches.

The letter D denotes that a copy of the daily record has been received, that it is perfect throughout the year, and that the printed amount is the correct total of these daily entries.

An asterisk * denotes that the gauge was tested before erection, and a † that it has been visited and examined since. A note of interrogation (?) implies doubt, not necessarily error. ... indicates the absence of information.

BA is employed to indicate gauges originally provided out of the funds of the British Association.

In the column of altitudes several symbols are used, their meaning is as follows:—T, that a series of levels have been taken from the gauge to an Ordnance bench mark; T, that the height is estimated or ascertained approximately from the same source; L, that levels have been taken from the gauge to the sea, or to some datum other than Ordnance mean sea level; B, that the altitude has been taken by the barometer; and ?, that the height is uncertain.

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ENGLAND AND WALES.

DIVISION I.—MIDDLESEX.

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground ft.	in.	Height Above Sea Level feet.	Depth of Rain. 1874 inches.	Days on which ·01 or more fell.
MIDDLESEX.							
Hampton Wick (The Grove) ...	T. J. Nelson, Esq.....	5	1	1	27 ⅄	19·94	141
Teddington (Gomer House)	R. D. Blackmore, Esq...	5	0	10	26 ⅄	21·29	155
Ealing (Castle Bar Road).....	C. Jones, Esq.	5	0	1	100	19·86	121
D Hanworth (Riversdale).....	G. Anderson, Esq.	5	1	4	66	19·63	...
D Chiswick (Roy. Hort. Soc.)	Prf. W. Thistleton Dyer	8	0	9	25 ⅄	20·74	149
D Westminster (SpringGrdns), S.W.	Sir J. W. Bazalgette, CE	8	6	0	35 ⅄	18·32	...
,, ,, ,, ...	,, ,, ,, ...	12	65	11	95 ⅄	17·28	...
,, ,, ,, ...	,, ,, ,, ...	8	66	4	95 ⅄	16·49	...
London (Guildhall), E.C.	W. Haywood, Esq. C.E	8	51	0	98	20·19	169
D ,, (Regent's Park R. Bot. Soc)	W. Sowerby, Esq.....	8	1	0	126 ⅄	20·78	157
,, (Rochester Square) N.W. ...	J. Nickolls, Esq.	5	1	0	100 T	19·50	...
D† ,, (Camden Square), N.W.....	G. J. Symons, Esq. ...	8	0	6	111 ⅄	18·82	164
D Islington (Compton Terrace).....	Dr. Ballard	8	0	6	122 ⅄	18·79	142
* Upper Clapton (Hadham Ho.) ...	J. Parnell, Esq.	5	1	1	98 ⅄	19·98	170
Hampstead (Roslyn House)	C. H. L. Woodd, Esq..	8	1	4	307	21·72	...
† ,, (Squire's Mount).....	Rogers Field, Esq. C.E.	5	1	0	388 ⅄	21·01	154
D Child's Hill (Helenslea).....	A. J. Woodhouse, Esq.	...	1	0	250	21·06	154
* Kentish Town Reservoir Bank...	G. J. Symons, Esq. ..	5	0	10	200 T	18·53	...
D† Highgate Nurseries.....	J. Cutbush, Esq.	5	1	0	394 T	18·33	127
D Harrow (Northwick House)	H. St. J. Joyner, Esq.	5	0	6	200 ⅄	21·34	161
,, Weald	R. J. Knight, Esq. ...	5	1	2	350	20·36	...
D† Tottenham (Grove Ho.)	C. Ashford, Esq.	5	1	0	55 T	19·83	140
D† Muswell Hill.....	J. W. Scott, Esq.	5	0	9	310 T	21·22	176
D Pinner Hill	W. A. Tooke, Esq. ...	5	3	6	410	21·66	165
D Uxbridge (Harefield Park)	W. F. Vernon, Esq. ...	8	0	8	296 ⅄	20·40	165
Enfield (Nag's Head Lane)	W. C. Mylne, Esq. ...	...	3	0	89	21·96	...

DIVISION II.—SOUTH-EASTERN COUNTIES.

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Rain Gauge. Height Above Ground.	Rain Gauge. Height Above Sea Level	Depth of Rain. 1874	Days on which ·01 or more fell.
			ft. in.	feet.	inches.	
SURREY.						
D Haslemere	J. W. Penfold, Esq.	8	4 0	481	33·12	151
Godalming (Dunsfold)	Mr. W. Underwood	5	2 6	166	27·68	...
Haslemere (Weycombe)	G.B.Buckton,Esq.FRS	5	4 0	583 ⊼	34·13	...
D Dorking (Holmwood)	A. Sconce, Esq.	5	1 2	320 T	35·04	112
„ („)	„ „ „	...	...	320 T	34·53	...
D Farnham (Culverlands)	Miss Gibson	5	1 1	300 B	26·63	196
Chilworth (Postford House)	J. Pares, Esq.	5	1 6	200 ⊼	29·59	...
D Redhill (Earlswood)	G. Grabham, Esq., M.D.	5	1 2	...	25·89	...
D Albury	Rev. F. C. Clutterbuck	5	1 0	205 T	31·82	163
D† Guildford (Roy. Grammar Sch.)	Rev. Dr. Merriman	5	1 6	187 ⊼	25·61	139
D „ (Guildown)	Miss J. Y. Hadden	5	0 11	220 T	22·88	142
Dorking (Sandy Cross)	F. Taylor, Esq.	5	1 0	290	32·65	...
„ (Horsham Road)	Miss Wilkinson	5	0 10	234 ⊼	32·15	164
D „ (West Street)	Mrs. W. A. Marsh	10	35 0	234 T	32·12	163
„ (Brookmead)	T. L. M. Winter, Esq.	4	1 0	200 ⊼	28·97	...
„ (The Denbies) (*Foot*)	G. Cubitt, Esq., M.P.	...	...	...	31·02	...
„ „ (*Top*)	„ „ „	5	1 0	610 T	32·64	...
D Redhill (Oxford Road)	W. H. Tyndall, Esq.	8	1 0	300 ⊼	28·41	162
Reigate (Wray Park)	Mr. A. Rosling	5	1 3	...	29·36	...
Nutfield Priory	J. Fielden, Esq., M.P.	8	1 2	...	26·38	162
D Chobham (Northbourne)	Dr. Ward	8	1 2	93 ⊼	20·69	144
† Weybridge Heath	W. F. Harrison, Esq.	8	0 6	150 ⊼	23·70	...
D Croydon (Church Road)	G. Corden, Esq.	5	1 6	152 ⊼	24·10	131
D „ (Tanfield Lodge)	J. Weston, Esq.	5	0 8	155 ⊼	25·44	162
D „ (Dingwall Road)	J. Rickett, Esq.	5	5 3	180 ⊼	25·66	156
D „ (Waddon House)	P. Crowley, Esq.	8	1 6	...	26·16	151
„ (Addiscombe)	E. Mawley, Esq.	8	0 9	202 ⊼	24·56	168
D „ („)	„ „ „	...	...	...	24·74	...
D Surbiton (Ewell Road)	G. Dines, Esq.	5	1 0	94 ⊼	21·85	167
D „ (Grove Road)	C. Mostyn, Esq.	8	0 6	21	20·02	...
Thames Ditton (Seething Wells)	G. Lott, Esq.	10	0 2	25	20·84	...
Beulah Hill (Norbury)	S. R. Scott. Esq.	5	0 10	320	21·04	...
D Wimbledon	T. Devas, Esq.	12	4 0	160	20·84	149
Balham	B. Haughton, Esq., C.E.	5	1 0	...	23·96	136
D Richmond (Halford House)	J. Billett, Junr., Esq.	5	0 9	50 ⊼	19·86	149
D Kew Observatory	The Kew Committee	11	1 3	19 ⊼	19·62	144
Kennington Road	A. H. Thorns, Esq.	8	5 0	19 ⊼	17·37	130
KENT.						
D Dymchurch	H. D. Good, Esq.	8	1 0	12 ⊼	23·18	160
D Tenterden	J. Ellis Mace, Jr., Esq.	8	1 5	190 ⊼	25·40	171
Benenden (East End)	„ „ „	8	1 9	193 ⊼	24·70	...
D† Hythe	H. B. Mackeson, Esq.	8	0 6	12 T	32·28	210
Folkestone (Priory Leas)	R. B. Johnstone, Esq.	5	4 3	92 B	25·13	...
D† Tunbridge Wells	— Miller, Esq.	8	0 2	403 T	29·43	161
D† Dover (Russell Street)	H. J. Poulter, Esq.	5	1 6	30 ?	29·00	121
D „ (Buckland)	Mr. J. Donaldson	5	...	50	26·81	...
D Acrise	G. C. Woollett, Esq.	8	0 6	484 ⊼	31·21	182

DIVISION II.—SOUTH-EASTERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground.	Height above Sea Level	Depth of Rain. 1874	Days on which .01 or more fell.
			ft. in.	feet.	inches.	
KENT—(*con*).						
† Cranbrook (Hartley)	G. Pile, Jun. Esq.	5	4 0	405	26·70	189
D Goudhurst Vicarage	Rev. J. S. Clarke	5	1 1	412 T	24·27	163
Hythe (Lyminge)	R. Appach, Esq.	8	1 2	350	27·25	168
D Ashford (Beaver Green)	T. Nickalls, Esq.	5	1 0	155 T	20·63	154
D „ (East Hill)	J. S. Burra, Esq.	8	1 0	126 ⅄	24·10	140
D „	T. Thurston, Esq.	...	6 0	176	25 24	...
D Tunbridge (St. Stephens)	W. C. Punnett, Esq.	5	1 6	96 ⅄	26·51	144
D Staplehurst	Mr. W. Wilson	5	1 0	...	24·96	177
Edenbridge (Falconhurst Court)	J. G. Talbot, Esq., M.P.	5	1 0	400 L	28·46	152
D† Maidstone (Linton Park)	Mr. J. Robson	8	0 6	296 ⅄	23·49	143
† „ (East Sutton Park)	Mr. T. Skinner	8	0 6	387 T	21·41	...
D† „ (Hunton Court)	Mr. P. Goddard	8	0 6	80 T	21·45	134
„ (East Farleigh)	J. Case, Esq.	5	1 0	140	22·90	144
Charing (Otterden)	Rev. W. A. Paxton	5	1 0	507 ⅄	26·21	...
D Canterbury (Chilham)	J. Marten, Esq.	5	1 0	330 ⅄	25·67	147
D „ (Bridge Street)	Mr. J. Reid	5	1 6	52 T	22·29	175
Aylesford (Preston Hall)	Mr. Bradley	...	...	...	23·50	...
† Faversham (Brogdale)	W. C. Stunt, Esq.	5	4 0	140 T	18·78	122
D† Sandwich (Walton House Eastry)	Colonel Rae	5	1 0	53 T	20·98	...
D Seven Oaks (River Hill)	J. T. Rogers, Esq.	8	3 6	535 ⅄	25·86	127
D „ (Riverhead Vic.)	Rev. J. B. Murdoch	5	0 6	300 T	33·24	151
D East Malling (Clare House)	J. M. Clabon, Esq.	5	3 4	130	23·11	150
† Selling (Harefield)	E. Neame, Esq.	5	1 0	217 T	24·63	188
† Sheldwich	Rev. B. S. Malden	5	1 0	259 T	25·32	127
D Stourmouth	Rev. R. Drake	5	1 0	12 ?	18·39	...
D BA† Margate (Acol)	E. S. Lendon, Esq.	5	0 8	60 T	17·47	120
„ (Cecil Square)	W. Lane Sear, Esq. C.E.	5	6 6	37 ⅄	18·22	129
D Sittingbourne	G. Payne, Junr., Esq.	5	1 1	38	20 94	...
Chatham School of Mil. Eng.	Sergt. J. Conroy, R.E.	10	1 0	115 ⅄	16·73	128
D† Bromley Common, S.E.	Rev. A. Rawson	8	1 0	250 T	26·28	171
† Foot's Cray (Sidcup)	Miss Berens	5	0 8	231 T	21·11	...
Beckenham (The Hall) *monthly*	C. O. F. Cator, Esq.	5	0 3	168 ⅄	22·61	...
D† „ (Foxgrove)	Percy Bicknell, Esq.	5	0 5	141 ⅄	21·88	145
D† „ „	„ „	5	4 0	145 ⅄	21·17	140
D Forest Hill (Church Road)	Edwin E. Glyde, Esq.	5	1 0	152 T	21·39	172
D† Dartford (The Downs)	R. F. Jarvis, Esq.	5	2 4	162 ⅄	21·72	119
D† Eltham Green (Garden)	E. J. C. Smith, Esq.	5	1 0	80 T	22·38	157
D Lee (Blessington Road)	J. Grant, Esq., C.E.	10	4 9	49 ⅄	23·84	147
Greenwich (Royal Observatory)	Sir G. B. Airy, F.R.S.	8	0 5	155 T	19·95	...
D Deptford (Pumping Station)	W. Jeffree, Esq.	10	0 4	18 ⅄	24·99	149
D Erith (Crossness)	F. E. Houghton, Esq.	11	0 6	16 ⅄	23·32	149
„ „	„ „ „	11	0 6	24 ⅄	25·44	149
„ „	„ „ „	10	0 6	6	23·61	149
WEST SUSSEX.						
† Bognor (Aldwick)	H. Upton, Esq.	5	1 0	50 T	20·10	...
D† Worthing (Bedford Row)	W. J. Harris, Esq.	8	0 6	17 ⅄	21·64	148
„ („ „) *monthly*	„ „ „	5	1 0	18 ⅄	21·43	...

DIVISION II.—SOUTH-EASTERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter	Height Above Ground ft.	Height Above Ground in.	Height Above Sea Level feet	Depth of Rain. 1874 inches.	Days on which ·01 or more fell.
WEST SUSSEX—(*con.*)							
†Arundel (Yapton)	R. Redford, Esq.	5	1	0	23 ⅄	23·77	161
D West Thorney	F. Padwick, Esq.	...	1	3	10 ?	19·90	109
†Chichester (Westgate)	Dr. Tyacke	5	0	6	40 ⅄	24·93	...
† ,, (Shopwyke)	Rev. G. H. Woods	8	1	2	61 T	27·13	...
†Arundel (Dale Park)	J. C. Fletcher, Esq.	11	3	5	316 ⅄	29·72	...
D†Steyning	Col. Ingram	5	1	0	80 T	30·29	122
†Chichester (West Dean)	H. Paxton, Esq.	8	1	6	209 ⅄	31·53	188
† ,, (Chilgrove)	John W. Woods, Esq.	5	0	6	284 T	29·01	...
†Petworth Rectory	Rev. C. Holland	5	1	6	190 ⅄	34·72	142
†Horsham (Leonardslee)	Mr. Ford	5	1	6	273 T	27·85	...
Midhurst (Lynch)	J. Eames, Esq.	6	0	6	160 ?	32·43	...
D†Fernhurst [Haslemere]	Miss E. A. Salvin	8	0	10	301	29·87	...
Milland House [Liphook]	Rev. J. M. Heath	18	30	0	350	31·91	...
D Horsham (Swallowfield)	Capt. Bigg	5	1	0	...	26·24	162
Shillinglee Park [Haslemere]	Lady Jane Turnour	5	1	1	253 ⅄	30·76	158
EAST SUSSEX.							
Beachy Head	Miss W. L. Hall	5	1	0	515	21·17	...
,, ,,	,, ,, ,,	5	1	0	495	22·40	...
Eastbourne (Meads Rectory)	Rev. E. A. Adams	5	1	1	...	25·19	174
† ,, (Pevensey Road)	Miss W. L. Hall	5	4	0	12 L	25·34	147
† ,, (Cemetery)	,, ,, ,,	5	4	0	160 ⅄	24·68	168
†Pevensey Vicarage	Rev. H. Browne	8	0	6	15 ⅄	23·03	...
† ,, (Walls End Cott.)	M. Vidler, Esq., C.E.	8	4	0	10 T	18·32	137
Brighton (West Pier End)	E. Rowley, Esq.	5	...		37	14·23	...
D† ,, (Cambridge Rd., Hove)	H. B. Peake, Esq.	5	1	0	111 ⅄	24·50	...
D† ,, (St. James' St.)	E. Rowley, Esq.	5	1	0	37 ⅄	25·09	158
D† ,, (W. W. Lewes Road)	Brighton Water Works	5	3	8	90 ⅄	27·19	170
D†Hastings (Bleak House)	Mr. J. Banks	8	1	0	89 ⅄	22·67	123
† ,, (The Hollies)	A. H. Wood, Esq.	8	3	0	100 ⅄	21·88	153
D† ,, (Cemetery)	Mr. Field	5	1	0	500 T	22·58	153
† ,, (Hollington)	Capt. Lewis	5	1	0	315 B	21·41	136
D†Falmer	R. R. Verrall, Esq.	5	1	0	314 ⅄	29·76	95
†Lewes (Glynde Place)	Mr. J. McLeod	5	2	9	59 T	27·07	128
D Hailsham	Rev. J. Clyde Harvey	5	1	0	100	25·80	127
D†Battle	F. Webster, Esq.	5	1	3	200	25·88	...
D Warbleton Rectory	Rev. G. E. Haviland	5	1	1	182 ⅄	27·99	203
†Framfield (The Grange)	Capt. T. G. Drake, R.N.	8	1	2	185 B	26·41	118
D†Uckfield Observatory	C. L. Prince, Esq.	12	6	0	149 ⅄	24·65	120
†Newick (Ketches)	Miss I. Shiffner	8	0	5	192 T	25·39	139
D Salehurst Vicarage	Rev. A. Orr	...	2	6	120 ?	25·07	...
D†Buxted Park	Col. Harcourt	8	1	0	193	25·72	164
D†Maresfield (Forest Lodge)	Captain W. Noble	8	1	2	247 ⅄	29·17	186
D†Hayward's Heath (Asylum)	Rev. T. E. Crallan	5	1	0	250 T	25·76	174
Domons (Northiam)	J. Rock, Esq.	8	0	6	210	25·67	...
D Ticehurst	F. Wilton, Esq.	8	1	3	380	29·44	181
D†Crowboro' Beacon Observatory	C. L. Prince, Esq.	8	0	6	777 ⅄	32·76	140
D Balcombe Place	J. A. Hankey, Esq.	8	1	8	300 B	27·78	144

DIVISION II.—SOUTH-EASTERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter	Height Above Ground. ft.	in.	Height Above Sea Level feet.	Depth of Rain. 1874 inches.	Days on which ·01 or more fell.
EAST SUSSEX—(*con.*)							
Forest Row (Ashdown Cottage)..	H. J. Slack, Esq.	8	1	0	430	33·27	...
East Grinstead	W.V.K. Stenning, Esq.	5	1	3	356 ⅄	30 61	156
HAMPSHIRE.							
ISLE OF WIGHT.							
Ventnor (Roy. N. Con. Hosp.)...	Dr. Williamson	8	3	3	75	23·67	148
D † St. Lawrence	Rev. C. Malden	5	1	0	75 ⅄	25·59	158
† Ventnor (Belgrave House)	Dr. Martin.....	12	3	0	150 ⅄	24·79	160
D Newport	E. G. Aldridge, Esq....	5	12	9	57 ⅄	28·66	142
D † Ryde	R. Taylor, Esq.	12	7	0	20 ⅄	28·44	125
D † Osborne	J. R. Mann, Esq.	8	0	8	172 ⅄	26·48	174
Bournemouth (Holmwood)	Dr. Compton..... ...	5	0	4	112 ⅄	25·80	156
Christchurch (Carbery)	F. Moser, Esq.	8	0	8	98 ⅄	25·90	141
Lymington	G. J. Jones, Esq.....	5	0	7	72	25·24	141
D „ (Wainsford).....	H. Fawcett, Esq.	5	1	0	58 ⅄	25·30	144
D Portsmouth.....	W. C. Ellis, Esq.	8	0	5	20	25·28	157
Southampton (Cadland).....	A. H. Hogg, Esq.....	8	3	6	52 T	32·61	204
Fareham	H. Sharland, Esq.....	8	6	0	36	27·03	...
D Havant (Leigh Park)	W. H. Stone, Esq. ...	8	0	10	108	20·48	111
Southampton, Ordnance Survey Office	Maj-Gen. Sir H. James R.E., F.R.S.	5 / 14	0 / 18	4 / 6	74 ⅄ / 92 ⅄	31·15 / 27·55	165 / 166
D „ (Woolston Lodge)..	F. Ekless, Esq.	5	1	0	90	29·51	...
„ (Eling House)	W. C. Spooner, Esq....	5	1	0	30	27·89	...
D † „ (Red Lodge)....	R. C. Hankinson, Esq.	5	0	6	200	28·57	188
D Botley (Moorhill, Shedfield).....	Adl. Sir T. S. Pasley, Bt.	8	2	0	160 ⅄	29·77	199
D Bishop's Waltham (Swanmore Ho)	B. P. Shearer, Esq. ...	5	0	4	390 T	30·80	218
D Droxford Rectory	Rev. S. Bridge	...	0	8	...	30·87	184
D † Winchester (Otterbourne)	J. B. Yonge, Esq.....	5	1	6	115 ⅄	26·69	135
Petersfield (Liss Place)	G. E. Corvton, Esq. ...	7	0	7	250 ⅄	30·56	...
D † Alresford (Arle Bury).....	F. Marx, Esq.	4	1	6	308 ⅄	31·22	139
D † „ (Wester Court)	T. P May, Esq.	8	0	9	253 T	30·44	141
D † Selborne (The Wakes).....	T. Bell, Esq., F.R.S..	6	4	0	400 ⅄	33·01	146
† Alton (Ashdell)	F. Crowley, Esq.	8	3	6	396 ⅄	33·14	...
Dogmersfield Park.....	Sir H. B. Mildmay, Bt	5	2	0	...	25·38	...
D Aldershot	Mr. J. Arnold	8	0	6	325	26·51	165
„ (Bourley—2 miles W.)	„ „ „	8	1	0	370	27·69	168
D Basingstoke (Chapel Hill).....	G. Stephens, Esq.....	5	1	0	328 T	24·53	176
D Litchfield Rectory	Rev. H. B. Heberden..	5	0	8	400 ⅄	27·73	169
Rotherwick (Tylney Hall)	C. E. Harris, Esq.....	5	0	8	330 T	23·69	...
D † Basingstoke (Sherborne St. John)	Rev. D. W. Chute ...	5	1	2	276 T	24·71	146
D † „ (The Vyne)	W. Wiggett Chute, Esq.	8	1	2	236 T	22·14	142
† „ („ „)	„ „ „	3	1	2	236 T	23·37	142
Hartley Westpall	Rev. J. Keate, M.A....	8	0	7	233 B	22·47	...
D † Strathfield Turgiss	Rev. C. H. Griffith ...	5	3	0	200 ⅄	21·58	...
† Heckfield (Park Corner).....	J. Martineau, Esq.....	5	1	4	258 T	21·16	...
† Strathfieldsaye	Mr. J. Bell.....	8	1	0	160 T	22·57	109

DIVISION II.- SOUTH-EASTERN COUNTIES—(*continued.*)

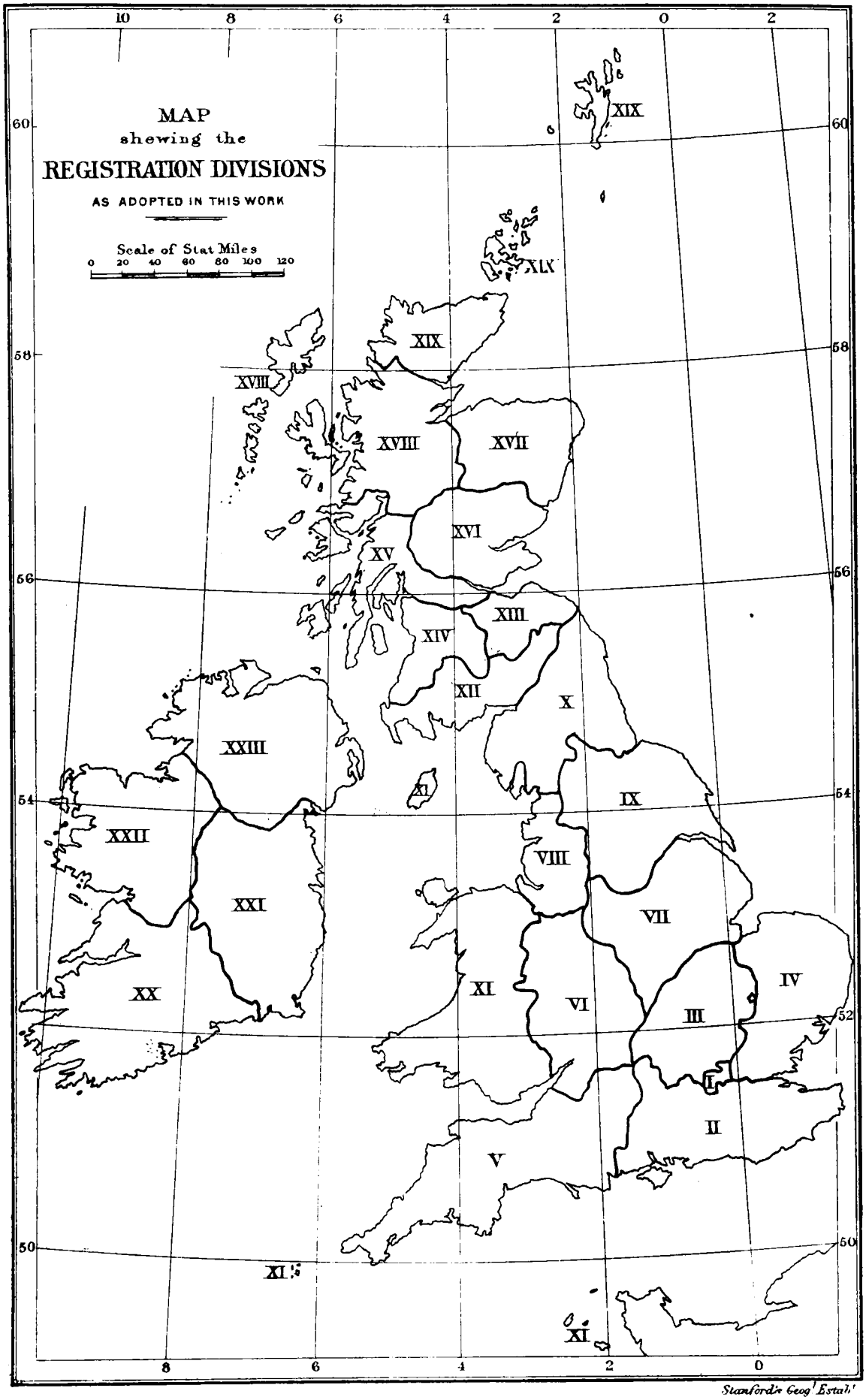
STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground.	Height Above Sea Level	Depth of Rain. 1874	Days on which ·01 or more fell.
			ft. in.	feet.	inches.	
BERKS.						
D Sunningdale (Lynwood)	Admiral Sir F.W.Grey	8	0 9	264 ⅄	24·74	157
Wokingham (Bearwood)	Mr. Tegg	5	3 0	...	18·12	...
D † Reading (Russell Street)	Dr. Workman	5	2 8	159 ⅄	20·65	159
,, (The Acacias)	A. Palmer, Esq.	5	3 0	146 T	19·86	129
Newbury (Greenham)	Capt. J. Ward, R.N.	5	1 0	260 L	22·92	157
D ,, (Welford Park)	Mr. C. Ross	5	0 11	335 ⅄	24·79	191
Maidenhead (Kimber Cottage)	Mr. J. Silver	8	1 2	93 ⅄	18·29	...
D Streatley Vicarage	Rev J. Slatter	10	0 4	150 ⅄	23·05	148
D Maidenhead (Cookham Vic.)	Rev. R. W. Rogers	5	1 3	90 ?	19·71	170
D ,, (The Halls, Cookham)	F. W. E. Jowers, Esq.	5	1 6	108	20·81	180
Shrivenham (Ashbury Vic.)	Rev. H. Miller	5	1 0	479 ⅄	26·12	154
D*† Wantage	E. C. Davey, Esq.	5	12 8	320 ⅄	21·98	126
Wallingford (The Castle)	J. Kirby Hedges, Esq.	5	0 9	175 ⅄	22·08	119
D† Long Wittenham	Rev. J. C. Clutterbuck	12	1 0	170 ⅄	21·58	140
D† Abingdon	W. Belcher, Esq.	5	1 0	176 ⅄	19·93	153

DIVISION III.—SOUTH MIDLAND COUNTIES.

HERTS.						
D Watford (Oaklands)	E. Harrison, Esq.	5	5 6	273 T	21·21	189
D Hatfield (North Mimms)	Rev. A. S. Latter	5	1 0	256 ⅄	22·72	125
D Hoddesdon (Field's Weir)	Beardmore & Barnes	20	3 0	82 L	20·20	123
Hertford (Bayfordbury)	W. C. Baker, Esq.	8	0 4	250	19·34	132
St. Albans (Gorhambury)	Mr. G. Bogue	6	2 9	...	22·48	137
D Hemelhempstead (Nash Mills)	Messrs J Dickinson & Co	12	3 9	237	21·63	156
D Gt. Berkhampstead (Ashlyns)	W. Longman, Esq.	...	0 9	600 ?	25·62	...
D ,,	W. Squire, Esq.	8	1 6	370 B	25·24	163
,, (Northchurch)	Rev. W. Eyre	5	1 0	365 ⅄	25·11	...
Tring (Cowroast)	H. Thomas, Esq.	10	4 2	345	24·62	140
Harpenden (Rothamstead)	Messrs. Lawes & Gilbert	5	2 0	420 T	23·29	177
,, (,,)	,, ,, ,,	72x87	2 0	420 T	24·30	176
,, (,,) *new g.*	,, ,, ,,	72x87	0 9	420 T	25·25	168
D Welwyn Rectory	Rev. C. L. Wingfield	5	0 4	...	21·31	177
D Kensworth [Dunstable]	T. Jones, Esq.	5	1 0	902 ⅄	21·58	101
D Ware (Much Hadham)	Rev. H. S. Mott	5	1 0	222 B	20·07	120
Stevenage	Rev. J. O. Seager	8	2 0	319 L	20·38	167
D Buntingford (Aspenden Rectory)	Rev. A. P. Sanderson	5	1 1	329 T	20 03	113
D Hitchin	W. Lucas, Esq.	8	1 0	238 ⅄	20·25	170
D Royston	H. Wortham, Esq.	8	0 6	269 ⅄	17·79	157
BUCKINGHAMSHIRE.						
D Slough (Stoke)	Mr. W. Hatfield	...	1 0	206	20·58	123
High Wycombe	H. S. Wheeler, Esq.	8	0 9	225 ⅄	23·05	...
D Great Missenden	Mr. J. Begbie	6	1 0	...	24·13	...
Aylesbury	J. Copcutt, Esq., C.E.	12	1 0	...	21·60	78
D† Winslow (Addington Manor)	E. Hubbard, Esq., M.P.	8	1 0	309 ⅄	22·08	164

DIVISION III.—SOUTH MIDLAND COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground.	Height Above Sea Level	Depth of Rain. 1874	Days on which ·01 or more fell.
			ft. in.	feet.	inches.	
BUCKINGHAMSHIRE—(*con.*)						
D Winslow (Addington Manor) ...	E. Hubbard, Esq., M.P.	5	0 9	...	20·43	160
†Buckingham (Adstock)	J. E. S. Weston, Esq..	5	0 9	...	21·88	169
† „ (Castle Fields) ...	E. Parrott, Esq.....	5	1 1	318 ?	20·85	154
† „ (School Lane).....	Mr. W. Walker.....	8	1 9	269 ⅄	20·41	173
Stony Stratford (Thornton)	Mr. W. Sturdy	5	1 6	...	20·10	...
D Newport Pagnell	R. Littleboy, Esq.....	5	2 0	...	19·77	...
OXFORD.						
Henley-on-Thames (Greys)	Rev. N. Pinder	5	1 6	370 T	25·13	...
Watlington (Swyncombe House)	Mrs. Ruck Keene ...	5	0 4	700?	22·45	86
Thame (Aston Rowant).....	T. Taylor, Esq.	8	1 9	395 B	20·44	...
D† Oxford (Magd. Col. Laboratory)	E. Chapman, Esq., M. A.	5	0 8	192 ⅄	20·93	154
D „ (Radcliffe Observatory)	Rev. R. Main, F.R.S...	10	0 11	208 ⅄	21·24	158
„ „	„ „ „	10	22 0	229 ⅄	20·19	157
„ „	„ „ „	12	24 0	231	18·35	141
„ „	„ „ „	10	112 0	319 ⅄	12·27	...
D Enstone (Chadlington)	W. Searle, Esq.....	5	5 0	800	21·65	123
D Upper Heyford	Rev. C. B. Mount.....	9	1 2	324 T	19·82	141
✠* Bicester (Stratton Audley Pk)	G. Glen, Esq.....	5	2 5	381 ⅄	17·95	...
Chipping Norton (Kingham).....	Rev. J. W. Lockwood.	5	3 6	442 B	23·61	...
D Banbury (Broughton Lodge) ...	E. C. Morrell, Esq. ...	5	0 6	442	25·10	163
D† „ (High Street).....	T. Beesley, Esq.....	6	7 0	350 B	23·54	171
NORTHAMPTON.						
D King's Sutton	Mr. E. Good	5	1 0	400	21·04	144
D Newbottle Manor [Banbury] ...	T.L.M.Cartwright,Esq	...	...	...	18·43	...
D Thorpe Mandeville.....	Rev. W. L. Browning	5	1 0	580	24·57	161
Weedon Beck Vicarage	Rev. J. S. Winter.....	8	1 6	280 T	20·76	...
„	R. Capell, Esq.	...	...	...	21·43	...
Castle Ashby	R. Scriven, Esq.	...	...	...	18·88	...
D Northampton (St. Giles's Street)	H. Terry, Esq.	5	5 0	253 ⅄	20·33	152
D „ (Gold Street)	S. Law, Esq.	5	6 6	230 ⅄	20·26	162
D „ (Althorp House)...	Mr. W. F. Jakeman...	8	3 10	310 ⅄	20·57	151
Chapel Brampton	W. C. Rankin, Esq....	...	...	...	22·78	...
Wellingboro' (Croyland Abbey)..	E. Sharman, Esq.....	5	0 2	...	21·47	178
Kettering (Barton Seagrave ..	J. B. Tibbits, Esq. ...	8	1 2	300	19·12	133
„	J. Wallis, Esq.	8	1 3	300 B	21·86	168
Naseby (Woolleys).....	Mr. H. Harris	5	5 0	567	21·96	145
Rockingham Castle	Mr. J. Brown	5	1 3	400	21·88	126
Peterborough (Springfield Ho.)..	H. Whitwell, Esq. ...	8	3 2	...	14·97	...
D Easton [Stamford].....	C. Day, Esq.	5	1 0	220?	19·22	168
HUNTS.						
D St. Neots (Tetworth Hall)	Miss Kaye	5	0 6	114 T	16·85	137
Godmanchester (Farm Hall).....	G. I. Bevan, Esq.....	8	0 6	30 ?	16·64	128
D Huntingdon	Mrs. C. Margetts	5	0 4	52 T	18·22	123
* „ (Wistow)	Rev. T. Woodruff.....	5	1 2	...	18·04	...
Conington Castle	J. M. Heathcote, Esq..	5	1 0	...	18·51	...
Whittlesea Mere	R. Lunn, Esq.	...	...	...	17·79	149


MAP
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REGISTRATION DIVISIONS
AS ADOPTED IN THIS WORK
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10 8 6 4 2 0 2
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Stanford's Geog' Estab'

DIVISION III.—SOUTH-MIDLAND COUNTIES—(*continued.*)

STATIONS	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground.	Height Above Sea Level	Depth of Rain. 1874	Days on which ·01 or more fell
			ft. in.	feet.	inches.	
BEDFORD.						
D Leighton Buzzard (The Cedars)	W. Abrahams, Esq. ...	6	1 0	300 T	20·36	77
Stotfold [Baldock]	E. Swaine, Esq., M.D...	5	0 9	220	17·55	144
D Aspley Guise (Oaklands)	E. E. Dymond, Esq. .	5	1 1	433 T	19·50	156
„ (Hayfield House)	S. Douglas, Esq.	5	1 1	...	18·83	129
Silsoe	H. Trethewy, Esq. ...	5	1 0	...	18·11	...
D Ampthill	W. S. Slinn, Esq.	5	1 1	375	18·29	121
D Woburn (Hulcote Rectory)	Rev B Chernocke Smith	5	1 0	...	17·81	154
Biggleswade	C. T. Newbery, Esq ...	5	28 0	...	18·62	...
D Potton (Wrestlingworth)	H. J. King, Esq.	5	1 0	...	19·44	139
D Sandy Rectory	Rev. J. Richardson ...	5	0 7	...	18·85	129
Cardington	Mr. J. B. McLaren ...	8	0 0	106	18·63	...
D „ (Staff gauge)	„ „ „	12	3 6	109	17·19	143
„	„ „ „	8	36 0	142	15·04	...
Bedford	D. Robie, Esq.	8	0 6	110 T	17·04	146
Tempsford	Col. W. Stuart	5	0 9	140 B	17·69	...
CAMBRIDGE.						
D Guilden Morden [Royston]	J. G. Johnson, Esq. ...	5	1 2	...	15·95	141
Abington Pigotts [„]	G. Pigott, Esq.	8	0 6	130 B	18·52	153
D Pampisford Hall	Mr. Morley	5	1 0	113 ⅄	16·40	167
Granchester Mill	J. Nutter, Esq.	5	4 0	31 ⅄	15·25	150
Cambridge (W.W. Cherryhinton)	H. Tomlison, Esq., C.E.	5	1 0	35 ⅄	14·26	194
D „ (Beech House)	J. Nutter, Esq.	8	4 0	40 ⅄	15·60	152
D „ (Merton Villa)	G. Warren, Esq.	5	1 0	30 ⅄	16·14	161
D „ (Sidney Street)	Mr. W. E. Paine	8	51 0	83 ⅄	15·34	150
D* „ (Observatory)	Professor Adams, F.R.S.	5	1 0	85 ⅄	16 87	171
D Cheveley Park	Mr. W. Challis	8	1 0	...	15·91	88
D Ely (Stretham)	Mr. Edwin Stanley ...	9	4 9	...	14·70	121
Chatteris (Aylesby House)	A. S. Ruston, Esq. ...	...	...	...	17·70	...
„ (Horseway Lock)	R. Lunn, Esq.	...	...	...	12·85	177
March	„ „	9	6 6	...	16·61	...
„	R. Dawbarn, Junr. Esq.	5	1 0	...	17·90	128
„ (Stags Holt)	W. C. Little, Esq. ...	5	1 0	15 ?	17·52	...
Stanground Sluice	R. Lunn, Esq.	...	...	...	15·68	100
Elm (Coldham Hall)	H. J. Little, Esq.	5	1 0	12	19·36	136
Upwell (Marmont Priory Lock)	R. Lunn, Esq.	...	...	...	16·37	173
Wisbech (The Limes Elm)	G. J. Moore, Esq.	5	1 0	...	18·73	89
D „ (Harecroft Ho.)	A. Peckover, Esq.	8	0 8	11 T	20·12	150
D† „ (Observatory)	S. H. Miller, Esq.	8	0 6	10 T	19·45	153
† „ „ (*monthly*)	„ „ „	5	0 6	10 T	18·64	...
† „ „	„ „ „	8	8 0	18 ⅄	18·83	153
† „ „	„ „ „	20×10	35 0	45 T	16·06	...

DIVISION IV.—EASTERN COUNTIES.

STATIONS	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground.	Height Above Sea Level	Depth of Rain. 1874	Days on which ·01 or more fell.
			ft. in.	feet.	inches.	
ESSEX.						
D Shoeburyness ..	Capt. Fairford Ellis, R A	5	4 7	13	14·20	107
D Barking (Loxford Hall)	Mr. J. Douglas	5	1 0	...	18·40	8
Walthamstow	W. R. Birt, Esq.	5	1 5	70 T	20·50	188
Brentwood (Sawyer's Hall Farm)	Rogers Field, Esq., C.E.	5	1 0	270 T	20·29	112
Maldon (Cold Norton)	C. Clarke, Esq.	5	1 2	...	17·28	108
D „ (Purleigh)	Rev. G. F. Tamplin ...	5	4 0	80?	16·19	124
D Waltham Abbey	The Superintendent ...	8	4 0	83?	18·41	...
Epping (The Hemnalls)	J. Nicholl, Esq.	8	0 8	345 T	22·60	140
Chelmsford	F. Chancellor, Esq.	8	1 0	86 T	19·56	133
D Harlow (Sheering)	Rev. Canon Hill	5	1 0	214 T	21·11	176
D „ (Moor Hall)	Mr. Huntley	8	1 6	220 ⊼	19·59	132
Witham (Dorward's Hall)	H. Dixon, Esq.	5	1 6	20 ?	18·02	...
D Dunmow (High Roding)	Rev. E. Maxwell	5	1 0	252 T	18·88	168
Coggeshall (Feering House) ...	Harris Hills, Esq.	8	1 0	100 T	16·85	...
D Dunmow	H. E. Cockayne, Esq...	12	0 0	250 ⊼	19·62	129
*Colchester (Birch Hall)	Mr. W. Ingle	5	1 0	80	16·72	120
Braintree (Bocking)	S. Tabor, Esq.	12	4 0	200 T	19·88	112
Manningtree (Wix)	R. Field, Esq., C.E....	5	1 0	90 T	16·41	133
Ramsey (Foulton Hall)	J. South, Esq.	5	...	...	18·91	104
D Dedham (Lower Park)	W. H. Penrose, Esq....	8	0 6	60 ?	15·23	158
Hedingham Castle	L A Majendie Esq, M.P.	8	1 0	...	17·24	96
D †Saffron Waldon (Audley End)	Mr. J. Bryan	5	1 0	163 ⊼	18·34	167
† „ „ („ River Bank)	„ „	5	1 0	151 ⊼	17·14	...
D „ „	J. G. Bellingham, Esq.	5	1 0	180 ⊼	18·09	162
„ „ (Ashdon)	Rev. J. T. Walker	8	1 0	300 ⊼	18·83	...
SUFFOLK.						
D Nayland (Tendring Hall)	Mr. G. L. Rushmore ...	8	0 8	135 ⊼	15·41	94
D Hadleigh (Boxford)	Rev. J. Byng	8	0 10	...	17·01	142
„ („) *monthly*	„ „	8	0 10	...	17·71	...
D Sudbury	J. Alexander, Esq. ...	5	3 10	116 B	18·20	152
D Ipswich (Bishop's Hill)	G. A. Biddell, Esq. ...	5	1 0	104 ⊼	14·97	144
D „ (Woodbridge Road)	S. Alexander, Esq.	5	1 1	90	16·15	123
D Hadleigh (Aldham)	T. F. Lloyd, Esq.	5	2 6	...	18·92	131
D Woodbridge (Grundisburgh) ...	P. Harris, Esq.	5	3 9	...	18·07	153
Ash Bocking Vicarage ...	Rev. M. B. Cowell ...	5	7 3	231 T	15·07	111
Wickham Market	G. Binyon, Esq.	8	0 6	100 ⊼	18·66	122
Saxmundham (Carlton Hall) ...	Mr. Knights	8	5 0	...	19·12	160
D Bury St. Edmunds (Drinkstone Pk)	Mr. Nichol	8	1 2	250	18·34	115
D† „ „ (Abbeygate St.)	T. C. Hinnell, Esq. ...	6	45 0	...	18·64	143
D Stowmarket (Wetherden Rec.)...	Rev. C. J. Goodhart ...	8	0 6	185 T	16·61	167
D† Bury St. Edmunds (Beech Hill)	H. Turner, Esq.	6	1 0	...	18·18	...
† „ „ (Westley) ...	R. Burrell, Esq.	5	1 6	...	16·82	...
D† „ „ (Barton Hall)	Mr. W. Allan	5	1 0	...	18·33	146
D† „ „ (Culford)	Mr. P. Grieve	5	1 6	...	17·83	135
†Ixworth	Rev. W. Steggall	5	1 10	...	18·44	153
D† „ (Walsham-le-Willows)..	Miss Martineau	5	0 11	...	20·44	151
† „ (Barningham)	J. Fison, Esq.	8	0 10	125 ?	17·30	...

DIVISION IV.—EASTERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground.	Height Above Sea Level	Depth of Rain 1874	Days on which ·01 or more fell.
			ft. in.	feet.	inches.	
SUFFOLK—(*con.*)						
†Lowestoft (Gisleham)	Rev. H. Jodrell	5	1 6	36 T	20·68	...
† „ (Carlton Colville)	G. Edwards, Esq. C.E.	8	0 9	6 T	20·94	...
D† „ (Somerleyton Hall)	Mr. Rix	8	0 9	60	19·00	144
D† „ („ Rectory)	Rev. C. J. Steward	8	1 0	50	21·27	174
NORFOLK.						
DDiss	T. E. Amyot, Esq.	5	1 0	96	18·96	152
D†Geldeston [Beccles]	E. T. Dowson, Esq.	5	1 0	40 B	21·00	159
D „ Rectory [Beccles]	Rev. D. Gillett	5	1 0	55	22·41	168
†BAWest Tofts [Brandon]	Mr. R. Martin	5	1 6	91 T	19·83	161
DHingham	Rev. J. M. Du Port	...	...	...	21·25	...
D†Downham Market (W. Dereham)	Mr. C. Blanchfield	5	0 11	20	19·09	184
DThetford (Ovington)	Rev. C. J. Evans	5	2 0	...	19·72	...
D†Stoke Ferry (Wereham)	F R Hawkes-Mason Esq	5	6 0	66 T	16·36	140
Outwell Sluice	R. Lunn, Esq.	...	...	...	16·04	137
†Downham Market (Fincham)	Rev. W. Blyth	3	4 0	50 T	18·10	...
Barnham Broom	Rev. J. M. Du Port	...	...	...	21·91	...
Swaffham (Pickenham Hall)	E. A. Applewhaite, Esq	5	1 0	160T	20·69	148
Yarmouth (Halvergate Hall)	Miss Gillett	5	3 3	48 T	21·06	132
Norwich (Eaton)	J. Pymar, Esq.	6	1 3	...	19·69	...
„ (Postwick)	Rev. J. M. Du Port	...	...	...	21·36	...
D „ (Literary Institution)	The Secretary	12	30 0	53 T	18·95	142
D „ (St. Clement's Hill)	P. E. Sewell, Esq.	...	1 0	70 ?	20·46	...
† „ (Thorpe)	W. Birkbeck, Esq.	5	1 0	137 T	22·20	177
DAcle (Lingwood)	Miss Burroughes	5	1 6	...	23·53	150
† „ (Rectory)	Rev. R. W. Kennion	8	0 9	40 T	22·37	141
D†Filby	Mr. Crisp	5	2 4	11	20·45	118
DSprowston (Oak Lodge)	T. C. Hardy, Esq.	5	1 0	...	20·45	179
DNorwich (Cossey)	H. Culley, Esq.	5	1 0	...	20·95	173
D† „ (Honingham Hall)	Lady Bayning	5	0 6	88 T	19·97	184
„ (Honingham)	Rev. J. M. Du Port	...	...	90	20·83	...
D†Mattishall	„ „ „	8	1 2	165 T	21·17	185
†Hockering	„ „ „	...	...	...	20·00	...
BA*Swaffham (Grammar School)	C. J. Drury, Esq.	5	1 10	239 T	20·43	165
„	Rev. J. M. Du Port	...	...	...	21·91	...
†Dereham	G. H. Cooper, Esq.	8	3 0	161 T	23·29	...
„	Mr. W. T. Gidney	9	3 0	160 T	18·48	...
St. Germans (Outlet Syphons)	R. Lunn, Esq.	...	...	...	21·52	117
Swaffham (Dunham)	Rev. J. M. Du Port	...	...	...	24·25	...
Drayton	„ „ „	..	...	...	22·71	...
Norwich (Salhouse)	„ „ „		...	...	21·90	...
DReepham (Hackford)	W. D. Bircham, Esq.	5	1 0	...	19·48	172
DCawston	Rev. T. H. Marsh	5	1 0	110	21·09	...
North Walsham (Worstead)	Mrs. Cooke	5	0 10	...	22·11	156
DLynn (North Wootton)	Rev. W. W. Clarke	5	1 2	...	18·35	135
D „ (Hillington Rectory)	Rev. H. Ffolkes	8	1 0	90 T	20·44	157
„ „ School)	„ „ „	5	4 0	94 T	20·17	155
D „ „ Hall)	Mr. Platt	5	1 0	74	21·48	124

DIVISION IV.—EASTERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground.	Height Above Sea Level	Depth of Rain. 1874	Days on which 01 or more fell.
			ft. in.	feet.	inches.	
NORFOLK—(*con.*)						
Colkirk	Rev. J. M. DuPort ...	...	...	...	20·57	...
Holt (Letheringsett Hall)	W. H. C. Hardy, Esq.	8	1 0	...	21·65	152
Cromer (Colne Lodge)	J. Cooper, Esq., M.D...	5	1 3	100 ?	20·77	163
D Burnham (Westgate)	W. H. Spencer, Esq ...	3	5 10	13	19·69	148
Holkham	J. Davidson, Esq. ...	8	0 0	39 L	19·60	153
D ,,	,, ,, ,, ...	12	4 0	43 L	18·40	154
D Wells	H. R. Rump, Esq.	5	1 0	16 T	19·76	167
D Hunstanton	Mr. Nisbet	11	3 8	60 ⅄	15·12	96

DIVISION V.—SOUTH-WESTERN COUNTIES.

WILTS.						
D Landford	J. R. Wigram, Esq. ...	5	1 10	160 T	28·18	166
Bower Chalk	Mr. G. Sidford ...	...	...	...	33·85	...
D† Salisbury (Alderbury)	Rev. R. S. Hutchings..	5	0 8	263	25·90	157
D† ,, (West Dean)	Rev. W. L. W. Eyre...	5	1 0	139 B	25·01	164
,, (Wilton House)	Mr. Challis ...	8	0 5	180 ⅄	29·70	163
,, (Roche Court) ...	C. W. Bell, Esq. ...	5	1 2	400 ?	28·93	...
† ,, (Lower Woodford)	H. Hinxman, Esq.	5	1 2	150 ⅄	26·72	...
D Salisbury Plain (Chiltern Ho.)	R. Hayward, jun., Esq.	11	4 0	380 ?	27·24	170
D ,, ,, (Orcheston)	Rev. J. Wardale ...	6	0 8	263 ⅄	27·10	160
Warminster (Downside)	W. J. Stent, Esq. ...	8	1 6	...	33·55	151
D Imber Vicarage	Rev. W. Slatter ...	5	4 0	400 ?	26·39	160
D Ludgershall [Andover]	E. G. Fawcett, Esq....	8	1 4	422 ⅄	28·03	161
D† Trowbridge (Sunny Side)	W. J. Mann, Esq. ...	5	1 1	190 T	24·44	...
D† Marlborough (College)	Rev. T. A. Preston ...	5	0 0	440 ⅄	30·71	176
† ,, (,,)	,, ,, ,, ...	5	1 0	441 ⅄	29·46	175
† ,, (,,)	,, ,, ,, ...	8	0 8	440 ⅄	29·90	175
,, (Kingsbury Street)	W. C. Merriman, Esq.	15	4 0	500	25·97	122
D ,, (Mildenhall)	Rev. C. Soames ...	5	1 0	467 T	27·10	166
D Calne (Compton Bassett)	Mr. J. Allen ...	8	1 0	400	26·84	184
D† Chippenham (Tytherton)	Major Gritton ...	5	1 2	157 B	24·65	180
D Swindon (Draycot Foliatt)	T. Arkell, Jun., Esq....	5	1 2	...	28·64	170
D ,, (Penhill)	T. Arkell, Esq. ...	5	0 10	400 ?	21·94	154
D Thames' Head [Cirencester]	J. H. Taunton, Esq., C.E.	8	4 0	350 ⅄	28·65	159
DORSET.						
D Kimmeridge	J. Mansel-Pleydell, Esq	5	0 4	80	26·73	123
D† Weymouth (Osmington Lodge)..	Major Hall ...	5	1 0	225 ?	31·26	173
D† Abbotsbury	Mr. A. Dight ...	5	3 0	150	28·20	108
D† Lyme Regis	H. Tucker, Esq. ...	5	4 6	146 B	37·21	171
D† Bridport (St. Andrew's Villas)..	H. J. Hoare, Esq. ...	8	0 8	60 B	30·30	148
D Blandford (Longthorns)	J. Mansel-Pleydell, Esq	5	0 4	340 B	32·74	136
D ,, (Whatcombe)	,, ,, ,,	5	0 4	300	34·47	107
D ,, (Bingham's Melcombe)	Rev. C. W. Bingham...	5	1 3	300 ?	39·55	183

DIVISION V.—SOUTH-WESTERN COUNTIES—(*continued*).

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground. ft.	in.	Height Above Sea Level feet.	Depth of Rain. 1874 inches.	Days on which ·01 or more fell
DORSET—(*con.*)							
D Beaminster	Rev. A. Codd	5	1	0	...	39·77	212
D Cerne Abbas (Melbury)	Mr. T. C. Elliott	12	2	9	...	35·25	106
D * Wimborne Minster (Chalbury)	Rev. G. H. Billington.	5	2	0	338 ⊼	30·36	161
Ashmore Rectory	Rev. T. Davidson	5	1	0	725	32·70	196
D Shaftesbury	T. Ackland, Esq.	5	1	1	722 T	33·92	145
DEVON.							
† Kingsbridge (Bolt Tail) (58)	W. Balkwill, Esq.	5	1	0	297 L	39·65	...
D † „ (Fore St. Hill) (56)	G. Fox, Esq.	5	1	0	63 B	43·16	167
† Plymouth (Old Town St.) (52)	Mr. A. P. Balkwill	5	35	0	150	42·14	...
D „ (Drake's Reservoir)	G. D. Bellamy, Esq.	5	0	6	140	45·15	197
D „ (Navigation School)	J. Merrifield, Esq. LL.D	8	9	2	75	35·53	181
† „ (Saltram Gardens) (51)	Mr. J. Snow	5	0	3	96 T	49·78	...
† „ (Ham) (53)	Rev. C. T. C. Trelawny	5	2	0	94 ⊼	43·47	135
D † Ivybridge (49)	Dr. Liddell	10	3	0	175 B	52·81	185
† Plympton St Mary (Ridgew'y) (50)	Miss B. T. Phillipps	5	0	6	116 ⊼	55·19	178
„ „ (Hemerdon) (69)	Rev. G. L. Woollcombe	5	1	0	350	56·06	...
Brixham (Lupton)	Mr. J. Gibson	12	4	0		39·49	146
Paignton (Hollacombe)	J. Greenfield, Esq.	5	7	0	70 ?	35·15	182
D † Torquay (Lamorna) (43)	W. Pengelly, Esq, F.R.S	5	0	9	200 ⊼	38·64	182
„ (Tor Crest Hall)	T. R. R. Stebbing, Esq	5	0	9	400 B	36·10	184
„ („ „)	„ „ „	5	3	9	403	33·73	177
† Dartmoor (Lee Moor) (44)	W. L. Martin, Esq.	5	0	9	860 ⊼	69·54	...
D † „ (Head Weir, Sheepstor) (41)	G. D. Bellamy, Esq.	5	1	0	690	63·83	210
D „ (Holne Vicarage) (33)	Rev. J. Gill	5	1	0	650	72·92	230
D † Ashburton (Druid House) (32)	Fabyan Amery, Esq.	5	1	0	570 T	57·44	207
D † Dartmoor (Prison Reservoir) (34)	Dr. Power	5	0	6	1416 ⊼	68 40	227
D † „ (Med. Officer's Lawn)	„ „	5	0	8	1389 ⊼	86·40	233
D † „ (Prison Garden) (34)	„ „	5	0	10	1387 ⊼	71·25	227
† Teignmouth (Landscore) (29)	Mrs. Clark	5	0	6	200 ⊼	41·60	...
D „ (Brookbank) (66)	G. W. Ormerod, Esq.	5	1	2	74 L	36·53	181
D † Ilsington (Middlecott Ho.) (23)	Alfred Lyon, Esq.	9	3	6	639 T	45·10	173
† Tavistock (Public Library) (38)	Mr. W. Reynolds	8	20	0	283 T	50·40	188
† * „ (Mount Tavy) (37)	H. Clark, Esq.	5	1	0	316 T	52·83	...
D † „ (Kilworthy Lane) (67)	W. Merrifield, Esq.	5	1	0	362 T	54·37	195
D Dartmoor (Widdecombe Grendon)	F. West, Esq.	...	0	10	950	55·55	...
D „ („ Vicarage)	Rev. J. Williams	5	8	0	810	43·67	...
† Milton Abbot (Endsleigh) (26)	Mr. Cornelius	5	1	0	180 ?	51·00	...
D † Bovey Tracey (22)	J. Divett, Esq.	5	0	6	94 ⊼	44·35	194
D † Exmouth (Budleigh Salterton)	R. Walker, Esq.	5	4	0	33	35·64	166
D „ (East Budleigh)	R. H. Lipscombe, Esq.	5	1	0	80	35·40	148
D Werrington Vic. [Launceston]	Rev. G. B. Gibbons	5	1	6	400	40·98	...
Sidmouth (Fore Street)	S. Chick, Esq.	10	25	0	43 ⊼	24·92	159
† „ (Sidmount)	Dr. Radford	5	1	0	149 ⊼	34·18	168
† „ („)	„ „ „	5	8	6	195 ⊼	31·90	168
† Seaton (White Cliff Glen)	T. F. A. Byles, Esq.	5	2	0	125	35·37	...

NOTE.—The numbers in parentheses on this and following pages refer to Maps inserted between pages 148 & 149, of *British Rainfall*, 1872.

DIVISION V.—SOUTH-WESTERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground. ft.	in.	Height Above Sea Level feet.	Depth of Rain. 1874 inches.	Days on which .01 or more fell.
DEVON—(*con.*)							
D† Clevelands [Lyme Regis]	E. L. Ames, Esq.	5	1	6	463 ⅄	36·45	162
† Topsham (Clyst St. George)	Rev. H. T. Ellacombe.	5	1	3	76 T	35·75	...
† Exeter (High Street) .....(17)	W. H. Ellis, Esq.	5	47	11	184 ⅄	33·74	154
† „ („ „)	„ „	10	44	3	180 ⅄	32·59	163
D† „(Devon & Exeter Institution)	Mr. E. Parfitt	6	13	7	155 ⅄	34·74	139
D† „ (Manston Terrace)... (18)	Miss Dymond.....	5	0	1	165 T	35·45	169
D Honiton (Gittisham)	C. Hardy, Esq.	5	1	0	...	39·21	168
†BA Okehampton(Oaklands) (19)	W. H. Holley, Esq. ...	5	1	0	521 T	51·18	241
DLA Holsworthy (Clawton)... (16)	W. W. Melhuish, Esq.	5	1	1	300?	42·52	184
D† Exeter(Brampford Speke)...(13)	W. H. Gamlen, Esq....	5	1	0	140 T	37·67	215
D Zeal Monachorum .....(63)	Rev.H. J. A. Fothergill	5	0	9	600	39·28	156
Cullompton (Clyst Hydon)	Rev. J. Huyshe.....	...	1	0	200 ⅄	34·40	...
D „ (Strath Culm)	C. R. Collins, Esq.....	8	0	6	159 ⅄	36·26	145
Chulmleigh (Eggesford) .....(73)	Mr. W. A. Spreadbury	8	1	2	400	36·75	123
D Tiverton (Springfield)	H. Stokes, Esq.....	5	1	0	300?	44·08	216
D „ (Exe Villa)	H. S. Gill, Esq.....	5	0	9	230	41·89	210
D Chulmleigh (Witheridge).....(8)	Rev. J. P. Benson.....	11	1	0	...	36·86	155
D† Torrington (Langtree Wick) ...	Miss Nunes	5	1	0	451 T	45·46	226
† „ („ „) ...	„ „	5	1	0	451 T	44·56	...
Tiverton (Loxbear Rectory)	Miss C. T. Hole.....	...	...		...	34·76	...
„ (Cove).....(9)	W. N. Row, Esq.	11	0	4	450?	43·95	...
D S. Molton (Meshaw) .....(62)	Rev. W. H. Karslake	8	0	6	472 L	40·02	202
„ (Rose Ash) .....(60)	Major Davy	8	0	6	650 T	42·99	174
Bampton (Huntsham)	Mr. H. Payne	8	0	6	600	44·27	...
† Bideford (Horwood)	Rev. J. Dene	5	1	0	288 T	33·56	185
† „ (Northam) .....(5)	Rev. J. D. Churchward	5	1	3	173	37 96	201
D South Molton	N C Hatherly,Esq M.D.	5	1	0	430	42·91	191
„ „ (Castle Hill) ...(4)	Mr. D. Wilson	12	3	5	300	50·70	...
† Barnstaple .....(3)	T. Mackrell, Esq.	8	1	0	31 ⅄	41·96	..
D „ (Bratton Fleming)(2)	Rev. H. S. Pinder.....	5	2	0	700?	50·97	204
Ilfracombe Hotel .....(1)	Mr. W. Clark.....	12	9	0	34	30·94	174
Martinhoe	Rev. C. Scriven	5	1	0	825	51·54	...
Lynmouth (Glenthorne)	Mr. T. Willcocks	...	...		...	44·47	...
CORNWALL.							
† Helston (St. Ruan Rect.)	Rev. F. C. Jackson ...	8	3	0	100	35·34	181
Land's End (Mayon House)	J. Symons, Jun., Esq..	5	3	0	308	38·70	111
D† Helston	M. P. Moyle, Esq.....	5	5	3	115 T	43·41	192
† Penzance (Regent's Parade).....	W. H. Richards, Esq.	12	3	0	94 T	46·47	...
D „ (St. Clare)	Rev Preben.Hedgeland	5	1	0	218	45·35	238
D „ (Poltair).....	Col. Trelawny	5	0	6	243	50·57	235
Falmouth Observatory	W. P. Dymond, Esq...	...	...		...	50·55	...
D „ (Lansdowne Road) ...	R. E. Thomas, Esq. ...	5	1	3	30	?40·24	186
D Camborne (Crowan)	Mr. J. T. Rodda.....	5	0	6	419 L	47·33	183
D „	„ „ „	11	1	4	230 L	49·85	178
D Falmouth (Carclew)	Mr. G. Palmer	5	0	6	...	50·46	198
† Redruth (Tehidy Park)	Mr. Mill.....	5	0	6	100 T	46·46	...
† Truro (Strangways Terr.).....	C. Barham, Esq., M.D.	8	2	0	71 B	43·33	209

DIVISION V.—SOUTH-WESTERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground. ft.	in.	Height Above Sea Level feet.	Depth of Rain. 1874 inches.	Days on which ·01 or more fell.
CORNWALL—(*con.*)							
D †Truro (Royal Institution)	Mr. Newcombe	5	40	0	56 ⅄	43·73	217
† „ (Penarth)	N. Whitley, Esq.	10	1	0	190 ⅄	39·64	202
D Probus (Lamellyn).....	H. Tresawna, Esq. ...	5	0	6	...	44·86	154
B A St. Agnes.....	Mr. Opie.....	5	1	2	278 B	41·85	179
*St. Austell (Cosgarne)	C. Truscott, Junr., Esq.	5	1	0	194 ⅄	50·41	208
D †* „ (Trevarna).....	W. Coode, Esq.....	5	0	6	300 ⅄	49·34	179
* „ (Trevarrick)	C. Truscott, Jun., Esq.	5	1	0	169 ⅄	50·81	210
D „ (Polcarne)	J. Coode, Esq.	5	1	0	206 T	52·31	188
Par Station (Penellick).....	W. E. Geach, Esq. ...	5	0	9	240 B	40·21	...
D St. Enoder (Retyn)	J. K. Martyn, Esq. ...	8	2	6	150 ?	39·67	184
D †Newquay	Mr. W. H. Tregidgo...	6	1	9	90 B	36·28	174
D †Liskeard (Dean Terrace) ...(47)	S. W. Jenkin, Esq. C.E.	5	1	1	375 ⅄	54·70	217
„ (St. Cleer) .....(68)	„ „ „	5	1	1	620 ⅄	54·43	...
D †Saltash (Pentillie Castle)...(46)	Mr. C. Edwards	5	1	3	150 B	54·77	183
D †Callington (Hingston Down) (39)	Captain Richards	11	3	0	850 T	55·32	232
†Bodmin (Castle Street)	Capt. Liddell, R.N....	8	2	4	338 T	48·16	227
D† „ („ „).....	„ „	5	1	0	338 T	51·35	227
† „ („ „)(*weekly*)	„ „	5	0	1	338 T	55·48	...
D† „ (Fore Street)	A. Hambly, Esq.	8	2	6	336 T	51·67	225
† „ (Warleggan)	Rev. D. Clements	8	2	6	650	51·91	232
†Wadebridge (Guinea Port)	Mr. C. Jordan	8	2	6	23 T	43·57	179
D† „ (Treglines, St. Minver)	Mr. T. Liddell, Jun....	10	3	0	140 T	36·20	183
D †Launceston (Altarnun).....(28)	C. U. Tripp, Esq.	5	1	0	570 B	61·10	239
D „ (South Petherwyn Vic.)	Rev. C. G. May..... ..	5	0	4	470 B	55·67	222
† „ (Hexworthy)...(27)	H. M. Harvey, Esq....	5	2	7	410 T	47·25	183
†Camelford (Lanteglos Rect.) ...	Rev. J. J. Wilkinson..	5	1	10	460	51·06	221
B A Jacobstow	Rev. F. T. Batchelor..	5	1	0	200	48·83	202
SOMERSET.							
Chard (Cricket St. Thomas).....	Viscount Bridport.....	5	1	0	440 B	42·15	190
D Crewkerne (Bincombe House) ...	F. J. Sparks, Esq. ...	5	1	2	250	34·73	149
Yeovil (West Coker)	Mr. A. Spurr.....	5	1	6	236 ⅄	31·30	175
D Ilminster	Rev. G. T. Gowring...	5	1	0	178 ⅄	33·86	175
D „ (South Petherton).....	W. Blake, Esq.	8	0	6	200 ?	28·53	177
„ („ „)(*monthly*)	„ „	5	1	2	...	26·84	...
Ilebrewers (Walrond Park)	J. Ostler, Jun., Esq....	5	0	8	116 T	28·29	126
Ilchester	J. W. Bourne, Esq. ...	8	2	6	40 ?	28·19	128
D Langport (Long Sutton)	R. W. Fry, Esq.	5	1	0	60	26·04	137
*Wellington (Sunnyside)	W. Elworthy, Esq. ...	5	1	0	...	31·02	165
D *Taunton (Fullands School).....	W. Reed, Esq.	5	1	4	...	25·76	135
„ (The Mount)	H. Alford, Esq.....	5	1	1	88 B	27·93	170
D „ (Lydeard House)	C. Smith, Esq.	5	1	0	...	32·74	169
D Glastonbury (Street).....	W. S. Clark, Esq.....	8	1	0	60	31·39	157
Dunster (The Priory)	Rev. J. Utten Todd ...	5	1	0	150	34·55	151
Wells (Dinder)	Rev. T. J. Bumpsted	8	2	6	140 B	36·11	151
D Burnham	Captain Estlin	5	1	0	18 ⅄	27·17	143
Frome (Mells Rectory)	Mrs. Horner	5	1	0	342 ⅄	40·68	189

DIVISION V.—SOUTH-WESTERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter	Height Above Ground. ft.	in.	Height Above Sea Level feet.	Depth of Rain. 1874 inches.	Days on which ·01 or more fell.
SOMERSET—(*con.*)							
E. Harptree (Sherborne Reservoir)	Bristol Water Works	5	1	0	338	50·03	...
Chew Magna	,, ,, ,,	5	1	0	160	38·95	...
D† Bath (Gay Street)	Dr. Barter	5	1	3	145 ⊼	30·75	166
D† ,, (Literary Institute)	C. P. Russell, Esq.	5	8	0	75 ⊼	29·66	157
D ,, (Weston)		5	10	0	190 L	30·39	169
D Batheaston (Reservoir)	A. Mitchell, Esq.	12	2	0	226 T	30·00	141
D Yatton (Chelvey)	Rev. J. Matthew	5	0	5	37 ?	35·69	180
Backwell	T. W. Huthwaite, Esq.	...	...		230 ?	36·19	133
Barrow Gurney Reservoir	Bristol Water Works	5	1	0	320	37·40	...

DIVISION VI.—WEST MIDLAND COUNTIES.

GLOUCESTER.							
D Bristol (Canon's Marsh)	A. S. Nash, Esq.	5	12	6	21 ⊼	32·53	137
,, (Small St.)	Bristol Water Works	12	25	0	40	30·57	...
Clifton (South Parade)	Dr. G. F. Burder	8	0	6	192 ⊼	35·25	...
Bristol (Cotham Park)	W. F. Denning, Esq.	5	0	8	230	34·84	...
Westbury (Cote House)	H. St. V. Ames, Esq.	12	3	0	200	33·08	...
D Fairford (Kempsford)	R. A. Iles, Esq.	5	0	8	...	22·07	142
Nailsworth (Spring Hill)	E. P. Westley, Esq.	8	2	0	160 ?	34·26	183
D Berkeley (Salter-street)	J. H. Cooke, Esq.	5	8	0	60	24·24	146
D Cirencester (The Firs)	J. Bravender, Esq.	5	0	8	352 ⊼	30·31	165
D Stroud (Brimscombe Port)	J. H. Taunton, Esq., C.E.	8	10	0	200 ⊼	28·56	130
D ,, (Upfield)	Miss Stanton	5	0	11	226 ⊼	27·47	164
D Fairford (Hatherop Rectory)	Rev. R. P. Davies	8	1	3	412 ⊼	27·54	150
,, (The Dean)	H. Arkell, Esq.	5	...		...	25·07	124
D Frampton-on-Severn (Saul Lodge)	W. B. Clegram, Esq. C.E.	5	3	6	42 ⊼	24·33	183
Northleach (Yanworth)	T. Arkell, Esq.	5	0	10	...	27·05	...
Gloucester (Witcomb Court)	A. Bubb, Esq.	8	2	0	290	24·13	...
D ,, (,, Water Works)	T. Small, Esq.	8	3	0	297 ⊼	26·11	133
,, (Park House) *monthly*	Alfred Price, Esq.	5	3	6	50 ⊼	22·13	...
D ,, (County Asylum)	E. Toller, Esq., M.D.	6	0	4	100	22·37	166
Huntly (Rectory)	Rev. H. Miles	5	0	8	210 B	27·13	...
Cheltenham (Prestbury)	G. Makgill, Esq.	5	0	8	271 ⊼	25·40	160
,,	W. McLandsboro', Esq.	8	0	6	422	24·53	...
,, (Keynsham Bank)	D. J. Humphries, Esq.	8	6	6	232 ⊼	25·09	158
,, (Chelt Sew. Wks.)	,, ,, ,,	8	2	0	154 ⊼	23·17	148
D Moreton-in-Marsh (Frogmore)	W. Arkell, Jun., Esq.	5	0	9	...	23·89	140
HEREFORD.							
D Ross (Rocklands)	J. M. Herbert, Esq.	8	1	10	97 B	30·28	167
,, (The Graig)	H. Southall, Esq.	5	1	0	200	25·98	180
D* ,, (Sellack Vicarage)	Rev. W. C. Ley	5	0	6	...	23·00	165
Longtown Vic. [Abergavenny]	Rev. C. L. Eagles	5	0	8	...	35·71	142
Bryngwyn	J. Rankin, Esq.	5	0	10	420 B	27·05	156

DIVISION VI.—WEST MIDLAND COUNTIES—(*continued*).

STATIONS.	AUTHORITIES	Rain Gauge. Diameter.	Rain Gauge. Height Above Ground.	Rain Gauge. Height Above Sea Level	Depth of Rain. 1874	Days on which ·01 or more fell.
			ft. in.	feet.	inches.	
HEREFORD—(*con.*)						
Ross (Brockhampton)	Mr. J. Eling	...	...	...	25·59	150
D Much Marcle (Caerswall)	T. Charles, Esq.	5	3 0	423	24·79	176
Hereford (Whitfield)	Mr. W. Wheatley	5	0 6	427	26·39	166
Ledbury (West Bank)	T. E. Wheatley, Esq.	5	0 6	400	22·35	149
D Hereford (Fownhope Vicarage)	Rev. T. West	5	1 1	192 B	23·84	154
D „ (Richmond Place)	E. J. Isbell, Esq.	8	5 8	188 T	24·36	190
„ (Davison's Nursery)	„ „ „	8	1 0	203 T	25·10	...
„ (Hagley Park)	A. Hutchinson, Esq.	5	0 6	298 B	23·84	...
„ (Tupsley)	P. Ballard, Esq.	5	1 1	242	22·84	...
D „ (Stretton)	Rev H. C. Key	5	1 0	198 T	25·80	151
D Staunton-on-Wye	Rev. H. W. Phillott	5	1 0	255	28·50	170
Leominster (Hampton Court)	J. H. Arkwright, Esq.	8	1 4	...	24·07	153
D Kington (Lynhales)	S. Robinson, Esq.	8	1 0	...	31·38	88
Bromyard Vicarage	Rev. Nash Stephenson	8	0 8	...	25·76	166
D Leominster (West Lodge)	E. P. Southall, Esq.	5	1 0	250 T	24·85	161
„ (Leysters)	Rev. T. S. Hewitt	5	0 6	600 ?	30·56	...
D Stoke Bliss	G. E. Alexander, Esq.	5	1 2	400 B	25·70	156
Wigmore (Kingsland)	Rev. E. Burton	5	0 10	..	26·44	153
SHROPSHIRE.						
Burford [Tenbury]	Lord Northwick	5	0 11	150 ?	23·28	...
D Ludlow (Knowbury)	Rev. J. B. James	6	0 4	1000 ?	25·43	...
„ (Mill Street)	W. Marston, Esq.	5	1 1	337 T	28·26	180
Wenlock (Staunton Long Vic.)	Rev. M. Hopton	8	1 2	700	25·95	...
D Bishop's Castle (Welsh Street)	E. Griffiths, Esq.	5	1 3	700 B	30·67	199
D „ (More Rectory)	Rev. A. S. Male	5	1 3	640 T	29·82	175
Church Stretton (Cardington)	Rev. W. Elliot	5	1 0	700	25·65	177
D „ (Woolstaston)	Rev. D. Carr	5	1 0	790 B	28·86	204
D Much Wenlock (Larden Hall)	Miss F. Rouse Boughton	8	1 3	...	28·40	...
Coalbrookdale (Horsehay)	C. T. Baugh, Esq.	5	2 8	...	20·96	..
D Shiffnal (Haughton Hall)	Rev. J. Brooke	5	3 5	353 T	23·50	189
Shrewsbury	Marshall & Co.	10	5 6	240	?16·65	78
D „	Dr. H. Johnson	6	3 0	230 T	?31·12	161
„ (Fitz Manor)	R. Middleton, Esq.	5	2 6	287 B	22·60	...
D Newport (Cheswell Grange)	T. Radcliffe, Esq.	...	1 0	250	22·56	178
D Wem (Sansaw Hall)	F. G. Tippinge, Esq.	5	1 0	310 T	23·22	147
Oswestry (Hengoed)	Rev. A. R. Lloyd	5	6 0	470 T	32·53	...
Market Drayton (Buntingsdale)	Mrs. Tayleur	5	3 0	...	23·93	...
„ (Nort'n-in-Hales)	Rev. F. Silver	8	1 0	335 T	25·38	118
D „ (Adderley)	Rev. Athelstan Corbet	5	0 9	245 ?	25·97	206
STAFFORD.						
D Wolverhampton (Merridale Road)	J. Thrustans, Esq.	5	1 0	428 T	27·59	177
„ (Town Hall)	A. Morgan, Esq., C.E.	5	15 6	482	26·55	184
D „ (Wrottesley)	Mr. E. Simpson	8	1 0	490	23·32	151
D Patshull Gardens	Mr. T. W. Dell	...	1 5	400	21·22	139
D Tamworth (Lichfield Street)	W. Arnold, Esq.	5	1 0	160 ?	23·63	161
Lichfield (St. Michael's)	Rev. J. J. Serjeantson.	5	0 3	323	26·14	...

DIVISION VI.—WEST MIDLAND COUNTIES.—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter	Height Above Ground. ft.	in.	Height Above Sea level	Depth of Rain. 1874	Days on which ·01 or more fell.
					feet.	inches.	
STAFFORD—(*con.*)							
D Weston-under-Lyziard [Shiffnal]	Hon. Rev. J. Bridgeman	3	0	10	...	24·49	203
D Penkridge (Rodbaston)	H. Ward, Esq.	5	0	10	...	24·86	201
D Shushions Manor	T. James, Esq.	5	1	0	325 L	23·28	179
Burton-on-Trent.	J. Matthews, Esq.....	5	8	0	154 ⅄	22·27	176
D „ „ (Horninglow) ...	R. W. Abbotts, Esq...	5	4	0	150	22·35	180
D Stoke (Barlaston)	W. Scott, Esq.	5	0	6	500 T	30·30	183
D† Cheadle (The Heath House) ...	J. C. Philips, Esq.....	5	1	0	647 T	30·76	189
D Ellastone [Ashbourne]	Rev Sir C. R Lighton, Bt.	5	3	0	400 B	31·92	179
Stoke (Stanley Reservoir)	‡Trent & Mersey Navga.	5	3	1	550 T	29·58	134
„ (Etruria)	„ „ „	5	1	2	440	31·76	170
Alstonfield Vicarage	Rev. W. H. Purchas...	5	1	2	...	38·32	171
Leek (Westwood Hall)	J. Robinson, Esq.....	5	1	8	655	30·52	...
„ (Rudyard)	Trent & Mersey Navga	5	12	7	500 T	29·18	121
Knypersley [Congleton]	„ „ „	5	14	0	500 T	30·19	136
Wincle [Macclesfield]	„ „ „	5	3	0	500 ⅄	33·78	165
WORCESTER.							
Northwick Park.....	Lord Northwick	8	1	6	...	29·22	...
D Upton-on-Severn..... ..	T. H. White, Esq. ...	5	1	1	...	22·76	160
D Evesham (Lansdowne)	R. Burlingham, Esq...	8	4	6	124 B	22·30	136
West Malvern.....	A. H. Hartland, Esq.	8	1	6	850 B	26·78	...
D Great Malvern (Wells Road) ...	W. Sandoe, Esq.	5	0	7	650	27·63	179
D Worcester (Sebright Lawn)	Mrs. Burgess.....	5	0	8	112 T	24·73	115
D Tenbury (Orleton)	T. H. Davis, Esq.....	5	0	9	200 ?	26·74	173
D Bromsgrove (The Ford House)...	G. Dipple, Esq.....	11	4	4	273 ⅄	25·23	172
„ (School).....	Mr. W. Dodd.....	6	0	5	...	25·93	...
D Kidderminster (Winterfold).....	J. Harward, Esq.	10	5	6	327 ⅄	24·34	156
D Stourbridge (Hagley Rectory) ...	Hon. Mrs. Lyttleton...	8	0	5	636 ⅄	29·79	184
Moseley [Birmingham].....	T. L. Plant, Esq.	5	4	0	487 ⅄	30·62	168
WARWICK.							
Radway (Ivy Lodge).....	Rev. G. Miller	5	1	1	530 T	25·51	174
D Henley-in-Arden (Arden House)	G. R. Dartnell, Esq....	5	2	2	400 ?	24·78	164
Leamington (Upper Parade) ...	S. U. Jones, Esq.	5	0	8	195 ⅄	22·75	168
„ (Brereton Villa) ...	G H. M. Whish, Esq.	5	1	0	202	22·89	170
Rugby School.....	A. Sidgwick, Esq.....	8	3	0	383 T	22·35	164
D Coventry (Priory Row).....	J. Gulson, Esq.	8	1	6	279 ⅄	24·47	173
D „ (Coundon)	R. Caldicott, Esq.	5	1	2	350	26·23	176
Bickenhill Vicarage	Rev. W. R. Capel.....	5	1	2	371 ⅄	22·22	136
D Willey Rect. [Lutterworth].....	B. P. M. Tayler, Esq...	8	1	3	350	23·76	192
D Birmingham (Botanic Gardens)..	Mr. Latham	5	5	2	...	25·23	177
† „ (Bloomsbury Street)	D. Smith, Esq.	8	0	8	340 T	27·88	160
D Nuneaton (Stretton House)	T. J. Scott, Esq.....	5	0	6	...	21·50	140
D† Oscott (St. Mary's College) ...	Rev. S. Whitty.....	5	0	6	461	24·69	197

‡ Returns supplied by T. W. Horn, Esq., C.E.

DIVISION VII.—NORTH MIDLAND COUNTIES.

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground. ft	in.	Height Above Sea Level	Depth of Rain. 1874	Days on which ·01 or more fell.
					feet.	inches.	
LEICESTER.							
Market Harboro' (Fairfield Rd.)	S. Watson Cox, Esq....	5	1	0	...	21·91	106
Bruntingthorpe	Rev. F. H. Bridges ...	5	0	5	...	23·35	...
Lutterworth (Ashby Magna).....	Rev. E. Willes	5	1	3	380 ?	21·36	...
† Market Harborough (Fleckney)..	J. B. Putt, Esq.....	5	0	8	411 T	19·66	...
D † Leicester (Town Museum)	W. J. Harrison, Esq...	5	1	0	238 T	20·17	184
„ (Belmont Villas)	H. Billson, Esq.....	8	1	6	240	21·42	181
D „ (Dane Hills).....	G. H. Baines, Esq. ...	5	1	0	205	19·46	161
D † Thornton Reservoir.....	C. Tebbutt, Esq.	10	2	8	420 ?	20·28	140
D Thurcaston (Cropston)	„ „	8	1	0	...	20·20	169
D Melton Mowbray (Dalby Hall)...	Mr. G. Jones	8	2	6	480 B	20·09	155
D Ashby-de-la-Zouch.....	G. H. Gibson, Esq. ...	5	1	0	440 ⅄	21·93	169
Loughborough (Cedar Cottage)...	J. Giles, Esq.	5	0	9	400 ?	21·09	...
D Melton Mowbray (Coston Rect.)	Rev. A. M. Rendell ...	5	1	0	300 ?	19·18	170
D Waltham-le-Wolds.....	Mr. E. Ball	5	1	6	500 T	21·05	195
D Harston [Grantham].....	C. Beasley, Esq.	...	1	3	...	19·20	163
D † Belvoir Castle	W. Ingram, Esq.....	8	1	0	237 T	17·10	161
RUTLAND.							
Ayston Hall	Rev. J. H. Fludyer ...	5	1	0	...	22·16	...
D Tickencote	W. Hayes, Esq.....	5	1	0	166 ⅄	18·33	142
D Tolethorpe Hall [Stamford].....	C. O. Eaton, Esq.....	8	0	8	100 ?	16·00	135
Burley-on-the-Hill	Mr. W. Temple	8	1	0	...	17·40	135
Ryhall	Rev. C. Potchett	5	1	4	...	19·17	103
D Market Overton	Miss H. E. G. Wingfield	8	0	11	...	18·27	177
D Thistleton Rectory	Rev. C. A. Holmes ..	5	0	6	...	19·28	146
LINCOLN.							
Stamford (Barn Hill Ho.)	Dr. Newman	5	1	0	116 T	16·37	...
* Bourne (Wytham-on-the-Hill) ...	A. C. Johnson, Esq....	5	1	3	167 ?	15·26	132
D Long Sutton (Tydd Gote).....	Mr. J. Tilson	5	4	0	...	17·21	162
Spalding (Pode Hole).....	Mr. A. Harrison	3	0	3	20 ⅄	16·22	...
D † Grantham	J. W. Jeans, Esq.	8	0	6	179 ⅄	16·94	132
Sleaford (Heydour).....	Rev. G. F. Deedes	5	2	4	...	17·77	92
D Boston	W. H. Wheeler, Esq. C.E	5	6	6	24 ⅄	18·22	144
D Stubton [Newark]	G. Nevile, Esq.	5	4	6	...	19·22	156
D Lincoln (Navenby).....	Rev. J. Hays	8	0	6	...	18·38	167
Horncastle (Miningsby).....	W. H. Wheeler, Esq, C.E	5	0	6	162	17·90	127
D Lincoln (Longhills)	A. S. Leslie Melville Esq	5	0	6	110 ?	20·59	152
D „ (Branston Hall)	Mr. J. Wright	5	1	0	136 ⅄	19·07	136
„	M. S. & L. R. Co ‡ ...	9	3	6	26	16·58	123
D B A Horncastle (Bucknall)	W. Carter, Esq.....	5	1	6	...	17·20	143
„ (Queen Street)...	H. George, Esq., M.D.	5	1	0	116	21·01	...
„	W. A. Rayson, Esq. ...	12	3	0	100	20·71	144
D Spilsby (Partney)	Rev. T. Owston.....	5	1	0	...	18·22	164
Lincoln (Hartsholme Hall)	J. Shuttleworth, Esq...	5	0	10	...	16·47	140

‡ Kept for the Canals Department of the Manchester, Sheffield, and Lincolnshire Railway Company.
Returns supplied by R. D. Heathcott, Esq.

DIVISION VII.—NORTH-MIDLAND COUNTIES—(*continued*).

STATION.	AUTHORITIES.	Rain Gauge. Diameter	Rain Gauge. Height Above Ground.	Rain Gauge. Height Above Sea level	Depth of Rain. 1874	Days on which 01 or more fell.
			ft. in.	feet.	inches.	
LINCOLN—(*con.*)						
Lincoln (Water Works)	J. H. Teague, Esq. ...	5	1 3	25	16·76	...
„ (Skellingthorpe Hall)	R. C. B. Coupland, Esq.	5	1 1	...	16·42	101
Gate Burton	M. S. & L. R. Co.	9	3 6	96	17·38	122
D Market Rasen (Faldingworth)	Rev. Irvin Eller	8	1 2	100	19·56	135
D† Louth	T. W. Wallis, Esq. ...	5	6 0	109 L	23·12	164
„	J. C. Hurley, Esq.		...	...	22·28	...
„ (The Cedars)	J. Bennett, Esq.		...	...	22·89	...
D† „ (Calcethorpe)	D. Grant Briggs, Esq.	8	0 10	380 ⅄	22·82	168
† „ („)	„ „ „ ...	5	0 10	380 ⅄	22·43	...
Market Rasen	M. S. & L. R. Co.	9	3 6	100	17·76	119
Gainsborough	„ „ „	...	...	76	16·91	98
Stockwith	„ „ „	9	3 6	21	14·94	103
Brigg	„ „ „	9	3 6	16	15·61	113
Grimsby	„ „ „	9	15 0	42	16·38	146
Barnetby	„ „ „	9	3 6	51	16·67	132
Crowle (Keadby)	„ „ „	...	...	10	16·71	113
D Ulceby (Killingholme)	Rev. J. Byron	5	1 4	60 ⅄	19·63	175
Appleby	Rev. J. E. Cross	5	0 9	60 L	20·59	139
Ferriby Sluice	„ „ „	...	...	...	20·01	...
New Holland	M. S. & L. R. Co.	9	3 6	18	16·28	154
NOTTS.						
D Ruddington Grange	J. Paget, Esq.	8	1 1	230 ?	18·95	161
Nottingham	M. O. Tarbotton, Esq.	8	1 0	183 ⅄	18·14	218
„ (Gedling)	Hn&RvO.W.Forrester	5	3 0	130?	19·29	165
Southwell (Oxton)	H. Sherbrooke, Esq.	2	2 0	...	20·76	...
D „	Miss Gaster	5	0 6	200	18·26	...
D Mansfield (Grove House)	R. Tyrer, Esq.	5	0 9	350 ⅄	22·95	200
Ollerton (Whitemoor)	H. Horncastle, Esq. ...	5	0 9	175 ?	17·60	141
D Welbeck Abbey	Mr. W. Tillery	5	4 0	88 ⅄	22·21	143
Worksop	M. S. & L. R. Co. ...	9	3 6	127	17·54	140
D „ (The Mount)	J. Ellis, Esq.	5	2 0	200 ⅄	19·92	159
Retford	M. S. & L. R. Co.	9	3 6	52	16·05	129
D „ (Babworth)	Mr. J. Douglas	5	1 0	...	18·48	142
DERBY.						
Bretby Park [Burton]	Mr. W. Brown	5	4 6	340	25·15	149
Winshill [„]	J. Matthews, Esq.	5	1 0	272	22·72	147
Melbourne	R. T. Tasker, Esq.	5	0 6	...	22·71	179
D Trent College	C. U. Tripp, Esq.	5	1 0	150 ?	17·36	163
Derby (Findern)	B. W. Spilsbury, Esq.	...	...	...	22·66	...
„ (Mickleover)	Mr. J. Campbell ...	5	2 2	320	22·78	...
D „	Messrs. J. Davis & Son	5	6 0	180 ⅄	21·35	174
„ (Spondon)	J. T. Barber, Esq.	5	0 7	262 T	20·23	...
D „ (West Hallam)	Rev. C. J. Newdigate	5	3 6	357 ?	19·96	166
„ (Long Lane Vic.)	Rev. S. Joy	8	3 6	400	29·79	162
„ (Duffield)	Mr. W. Bland	5	1 0	180 ?	25·59	154
Belper	J. G. Jackson, Esq. ...	5	0 8	222 ⅄	24·75	160
† Matlock (Willersley Gardens)	Mr. J. Tissington	6	1 3	440	36·99	...

DIVISION VII.—NORTH MIDLAND COUNTIES—(*continued.*)

STATION.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground. ft.	in.	Height Above Sea level feet.	Depth of Rain. 1874 inches.	Days on which ·01 or more fell.
DERBY—(*con.*)							
†Matlock (Bath)	R. Chadwick, Esq.	5	1	6	500 T	33·20	...
DChesterfield (Grassmoor Colliery)	E. Bromley, Esq.	5	9	1	...	21·95	175
„	M. S. & L. R. Co.	9	3	6	248	24·67	91
„ (Linacre Reservoir)	Rev. J. M. Mello	8	...		...	18·94	...
DBrampton (St. Thomas' Rect.)	„ „	5	3	0	314 ⅄	20·11	107
†Buxton (Axe Edge)	E. J. Sykes, Esq.	8	1	0	1620 B	40·97	...
„ (Poole's Cavern)	„ „ „	8	5	0	1085 T	53·25	185
† „ (Devonshire Hospital)	„ „ „	8	5	0	989 ⅄	50·19	205
†Stony Middleton	Rev. U. Smith	5	4	0	692 B	30·42	129
Kilnarsh (Norwood)	M. S. & L. R. Co.	9	3	6	238 T	18·61	138
Comb's Moss	„ „ „	9	3	6	1669 T	36·90	...
„ Reservoir	„ „ „	9	3	6	710 T	41·57	204
†Chapel-en-le-Frith	„ „ „	9	3	6	965 T	39·44	...
BA Burbage House	Mr. J. Farrar	5	2	10	1277 ⅄	28·56	...
BA Bamford	J. H. Moore, Esq.	5	0	3	530 T	26·89	...
Castleton	Miss Hall	...	1	0	700	39·70	...
†Woodhead	M. S. & L. R. Co.	9	3	6	878 T	42·84	206

DIVISION VIII.—NORTH-WESTERN COUNTIES.

CHESHIRE.							
DNantwich (Cholmondelly Cas.)	Mr. J. Malcolm	8	1	6	42	27·36	189
Crewe	R. Lord, Esq., M.D.	5	1	0	150	24·17	188
Chester (Pulford Hall)	R. Massie, Esq.	5	3	0	51 T	21·91	184
DCongleton (Buglawton Vic.)	Rev. W. Besant	8	5	0	347	28·13	190
Bosley Minns	M. S. & L. R. Co.	9	3	6	1210 T	30·03	132
„ Reservoir	„ „ „	9	3	6	590 T	33·38	150
DChester (Newton Nurseries)	J. Dickson & Sons	8	0	6	62 ⅄	24·10	149
DMiddlewich (Bostock Hall)	Major France Hayhurst	5	2	9	157 ⅄	27·03	135
DSiddington (Thornycroft Hall)	Mr. Povey	5	3	0	377 ⅄	30·08	169
Macclesfield	M. S. & L. R. Co.	9	3	6	539 T	31·72	157
D „ (Park Green)	Mr. W. Jeffery	8	2	1	450 ⅄	36·20	190
DChelford	C. Nichols, Esq.	5	1	6	260 ⅄	30·54	168
DNorthwich (Highfield)	J. Cleghorn, Esq.	8	3	5	...	28·41	196
„ (Winnington)	H. Neumann, Esq.	8	1	3	56	26·77	176
DFrodsham (Foxhill)	L. W. Reynolds, Esq.	5	0	10	230 T	24·08	196
DNeston (Hinderton)	Reginald Bushell, Esq.	5	1	0	215 ⅄	24·73	155
Bollington (Spond's Hill)	M. S. & L. R. Co.	9	3	6	1279 T	30·86	...
Whaley	„ „ „	9	3	6	602 T	39·84	223
Lyme Park	J F Bateman Esq F.R.S	...	...		680	46·97	...
Altrincham (Barrington House)	J. Newton, Esq., C.E.	5	1	0	105	34·60	...
DThelwall (Highfields)	T. G. Rylands, Esq.	5	1	0	118 ⅄	28·57	198
†Birkenhead (Bidstone Obs.)	J. Hartnup, Esq.	8	0	6	182	25·42	180
Marple Aqueduct	M. S. & L. R. Co.	9	3	6	321 T	37·68	168
„ Top Lock	„ „ „	9	3	6	543 T	35·22	162

DIVISION VIII.—NORTH-WESTERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Rain Gauge. Height Above Ground.	Rain Gauge. Height Above Sea Level	Depth of Rain. 1874	Days on which ·01 or more fell.
			ft. in.	feet.	inches	
CHESHIRE—(*con.*)						
Godley Reservoir	J.F.Bateman,Esq.FRS	...	...	500	30·83	...
Mottram Hill End	M. S. & L. R. Co.	9	3 6	680 T	35·92	182
,, Matley's Field	,, ,, ,,	9	3 6	399 T	32·41	162
Newton	,, ,, ,,	9	3 6	396 T	23·03	190
Arnfield Reservoir	J.F.Bateman,Esq.FRS	...	..	575	39·34	...
D Staleybridge (Swineshaw)	Mr. C. Beever	8	3 0	884 ⩚	43·25	185
† Rhodes Wood Reservoir	J.F.Bateman,Esq.FRS	12	1 0	520	42·53	...
† Woodhead ,,	,, ,, ,,	12	0 10	680	46·67	...
† Torrside ,,	,, ,, ,,	12	1 6	600	43·59	...
LANCASHIRE.						
D Warrington (Bewsey Street)	L. W. Reynolds, Esq.	5	1 0	49 ⩚	30·24	197
D ,, (Arpley)	R. Vawser, Esq., C.E.	10	10 0	33 ⩚	30·99	205
,, (Cemetery)	,, ,,	10	1 0	32 ⩚	30·99	...
D Liverpool (Allerton Greenhill)	G. H. Sing, Esq.	5	1 0	125	32·87	211
,, (Grove Park)	J. R. Darsie, Esq.	3	6 0	200	28·77	151
,, (WestDerby,Sandfield Park)	Mr. W. Biggs	8	1 2	147	28·45	...
D ,, (Walton-on-the-hill)	A. R. Andersson, Esq.	5	1 11	119 ⩚	29·98	188
D Heaton Chapel (Roseleigh)	J. Curtis, Esq.	8	2 3	235 T	32·71	200
Denton Reservoir	J.F.Bateman,Esq.FRS	...	...	324	30·47	...
Gorton ,,	,, ,, ,,	...	...	263	30·47	...
Manchester (Withington)	J. King, Junr., Esq.	5	1 0	110	28·58	190
,, (,,)	,, ,, ,,	5	...	...	28·65	...
† ,, (Old Trafford)	G. V. Vernon, Esq.	8	2 7	106 ⩚	34·10	203
D ,, (Plymouth Grove)	J. F. Roberts, Esq.	8	3 9	150 ⩚	33·06	216
,, (Helmshore)	J. Rawstron, Esq.	...	13 0	751	41·10	...
,, (Eccles)	T. Mackereth, Esq.	10	3 0	145 ⩚	35·23	221
,, (,,)	,, ,, ,,	5	34 0	179 ⩚	28·20	221
Salford (Town Hall)	,, ,, ,,	5	11 0	119 ⩚	30·91	234
Manchester (Ardwick)	J. Casartelli, Esq.	9	3 0	140 ⩚	35·33	189
† ,, (Piccadilly)	M. S. & L. R. Co.	9	40 0	194 T	30·61	182
Fairfield	,, ,, ,,	9	6 0	312 T	33·77	192
D St. Helen's (Rainford Hall)	G. McKibbin Esq.	5	0 9	147 T	35·21	195
D Shore Top (Outwood)	H. Bridson, Esq.	12	1 0	295 T	37·60	184
Oldham (Waterhouses)	M. S. & L. R. Co.	9	3 6	345 T	37·97	185
,, (Gas Works)	H. Andrew, Esq.	5	4 0	600 T	38·01	211
,, (Brushes Clough)	,, ,, ,,	5	4 0	950 T	43·84	224
,, (Piethorne)	,, ,, ,,	5	4 0	800 T	34·48	233
,, (Royton)	Mr. B. K. Bentley	5	1 0	544 ⩚	42·89	182
Bolton-le-Moors (The Folds)	H. H. Watson, Esq.	10	3 6	286 T	48·67	...
,, (Chorley Street)	J. Rigby, Esq.	6	6 9	331	52·76	214
D ,, (The Freehold)	W. Musgrave, Esq.	9	6 6	352 ⩚	47·12	205
,, (Heaton)	J. Wrigley, Esq.	6	1 3	500	45·60	160
D ,, (,,)	J. S. Holdsworth, Esq	10	3 6	497 ⩚	47·76	214
,, (Hurst Bank)	J. Watkins, Esq.	5	3 1	442 ⩚	45·13	...
,, (Moss Bank)	R. H. Ainsworth, Esq.	8	1 2	570	55·52	222
D ,, (Halliwell New Road)	W. Tyson. Esq.	5	1 4	549	54·23	204
,, (Belmont)	J. Wrigley, Esq.	6	0 9	800	65·20	177

DIVISION VIII.—NORTH WESTERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground.	Height Above Sea Level	Depth of Rain. 1874	Days on which .01 or more fell.
			ft. in.	feet.	inches	
LANCASHIRE—(*con.*)						
D Wigan (Water Works)	J. L. Hunter, Esq., C.E.	8	1 6	225 ⊼	41·26	195
Rivington	G. F. Deacon, Esq., C.E.	...	1 0	700 T	46·44	206
Entwistle	J. Wrigley, Esq.	6	1 0	700	58·30	158
D Rochdale (Drake Street)	T. H. Hayle, Esq..	4	3 7	473 ⊼	37·44	198
,, (Nayden Dane)	C. E. Cawley, Esq. M.P.	5	1 6	900	45·73	...
D Ormskirk (Rufford)	J. Porter, Esq.	5	0 8	38 T	33·85	195
Southport	J. Baxendell, Esq.	5	2 8	23 ⊼	31·67	191
D Over Darwen	Rev. W. H. Blamire...	5	1 0	600	54·97	221
Oswaldtwistle	W. Gourlay, Esq.	6	0 6	635	55·44	229
Rawtenstall (Clough Bridge Res.)	T. Rigby, Esq.	8	1 0	900 ⊼	52·30	236
Blackburn (W. Works Office)	J. F. Bateman, Esq. F.R.S	...	...	400	40·79	...
,, (Pickup Reservoir)	,, ,, ,,	...	...	720	46·90	...
,, (Guide Reservoir)	,, ,, ,,	...	...	650	45·30	...
D Burnley	W. B. Bryan, Esq.	8	29 9	410 ⊼	44·93	204
,, (Gas Works)	,, ,, ,,	8	21 0	388 ⊼	44·69	...
,, W. Works (Swindon)	J. Emmett, Esq.	18	18 0	750 ⊼	48·23	...
Blackpool (South Shore)	G. Sharples, Esq.	10	1 8	29	29·73	...
D Eccleston (Elswick Lodge)	S. King, Esq.	10	1 4	50 T	35·97	208
D Stonyhurst College	Rev. S. J. Perry, F.R.S	11	1 0	376 ⊼	51·20	206
,, ,, (*monthly*)	,, ,, ,,	11	0 8	376 ⊼	48·69	...
Preston W. Works. Alston	R. N. Hunter, Esq., C.E.	8	1 2	320 ⊼	45·65	...
Knowl Green	,, ,,	8	1 2	400 T	40·71	...
Jeffrey Hill	,, ,,	8	1 2	900 T	50·37	...
Loud-scales	,, ,,	8	1 2	400 T	42·48	...
Spade Mill	,, ,,	8	1 2	400 T	40·56	...
Clitheroe (Downham Hall)	R. Assheton, Esq. M.P	10	1 6	464 ⊼	45·47	...
Garstang (The Parsonage)	Rev. T. B. Armitstead	5	1 0	71 T	38·29	...
D ,, (Calder Mount)	C. Wilson, Esq.	5	10 0	100 ?	44·25	212
D ,, (Vale House)	J. Jackson, Junr., Esq.	6	4 3	455 ⊼	43·91	224
,, (Grizedale)	J. Bradley, Esq.	10	1 0	480	43·43	...
D Lancaster (South Road)	W. Roper, Esq.	12	3 6	114 ⊼	38·17	178
D† ,, (Caton)	Rev. A. Christopherson	5	1 6	117 ⊼	44·05	191
Melling (Hornby Castle	W. Housman, Esq.	12	3 2	100	51·64	164
Arkholme (Storr's Hall)	F. F. Pearson, Esq.	5	1 0	220 T	46·58	...
D Barrow	F. Slade, Esq	7	2 0	60 ⊼	39·44	212
Carnforth (Silverdale, Cove Ho.)	Rev. C. C. W. Shepheard	5	1 0	56	44·19	...
Cartmel (Flookburgh)	T. R. Croasdale, Esq...	5	2 4	70 B	41·58	123
D† ,, (Allithwaite)	Mr. W. R. Nash	5	1 0	88 T	41·08	188
† ,, (Holker)	Mr. W. Fox	8	4 8	155 ⊼	45·09	167
Grange (Bay Villa)	Amos Beardsley, Esq..	8	3 2	25 ⊼	46·12	154
D ,, (Nutwood)	Rev. E. Massie	...	3 0	100	45·78	214
D *Ulverston	J. H. Matthews, Esq.	5	5 6	98 ⊼	54·45	207
D Powka Beck	J. Lewis, Esq.	12	1 5	500	49·51	182
D Cartmel (Broughton Hall)	Major Ainsworth	5	2 8	230 T	52·53	199
D Broughton-in-Furness	Rev. F. A. Malleson...	5	1 3	40?	58·02	174
D ,, (Woodland Parsonage)	Rev. E. C. Shawfield..	5	3 9	100	56·11	217
† Coniston (Lanehead)	Mrs. Bywater	5	1 0	287 T	79·14	234
† Monk Coniston Park	V. Marshall, Esq.	10	4 11	150 ⊼	78·10	...

DIVISION VIII.—NORTH-WESTERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge			Depth of Rain.	Days on which 01 or more fell.
		Diameter.	Height Above Ground.	Height Above Sea Level	1874	
			ft. in.	feet.	inches.	
LANCASHIRE—(*con.*)						
D Monk Coniston Park	V. Marshall, Esq. ...	5	1 0	305	92·23	226
Coniston (The Parsonage)	Rev. C. Chapman	5	1 0	205	96·25	217
Hawkshead	W. Lane, Esq.	5	1 2	270 T	78·92	...
„ (Highfield)	W. H. Heelis, Esq. ...	5	1 0	460	82·81	226
D Low Wray	Rev. W. R. Morris ...	...	...	...	70·98	...
Brathay Hall [Ambleside]	G. Redmayne, Esq. ...	5	1 6	...	82·10	...

DIVISION IX.—YORKSHIRE.

WEST RIDING.						
D Sheffield (Richmond Hill)	W. D. Gainsford, Esq.	5	2 10	465 T	20·58	130
„ (Brincliffe Rise)	A. Chadburn, Esq. ...	5	1 2	500 T	26·27	163
„ (Edge)	M. S. & L. R. Co.....	9	3 6	336 T	22·99	143
D „ (Broomhall Park)	D. Doncaster, Jun. Esq.	10	2 0	330 ⊼	22·23	173
D † Redmires	J. Gunson, Esq.....	10	5 0	1100 T	32·21	200
„	„ „	8	4 0	1100 T	32·42	...
D Rivelin	„ „	10	4 0	564 T	28·42	188
„	„ „	8	4 0	564 T	28·71	...
D Crookes	„ „	10	2 0	634 T	24·31	179
„	„ „	8	2 0	634 T	23·58	...
Sheffield (Tinsley Locks)	M. S. & L. R. Co.	...	...	143 T	25·02	159
D Tickhill	G. G. Phillips, Esq. ...	8	1 0	61 ⊼	19·88	155
† Rotherham (Moorgate Grove)	R. Chrimes, Esq.	5	1 0	262 ⊼	20·34	169
D „ (Wath-upon-Dearne)	W. M Burman, Esq...	8	0 8	180 ⊼	17·74	170
„ (West Melton)	Rev. J. Boyd	6	0 10	172	16·62	147
Elsecar	M. S. & L. R. Co.....	9	...	175 T	17·78	147
Doncaster	„ „ „	9	...	35 T	16·12	140
D „ (Magdalens)	Mr. J. Howorth.....	5	4 6	46	18·89	153
Worsborough	M. S. & L. R. Co.....	9	...	225 T	16·19	180
† Dunford Bridge Station	„ „ „	9	3 6	954 T	40·39	193
D † „ „ (Reservoir)	Mr. G. Whitfield	12	2 0	1100 T	45·73	...
Penistone	M. S. & L. R. Co.....	9	3 6	717 T	22·68	132
† Carlcotes	„ „ „	9	3 6	1075 T	46·71	193
Barnsley	„ „ „	9	...	175 T	15·84	143
D „ (Church Street)	Dr. Sadler	5	3 10	350 T	18·48	184
† Saddleworth (Station)	E. Greenwood, Esq....	10	5 0	640 T	35·50	...
Denshaw	H. Andrew, Esq.	5	4 0	1050 T	39·54	226
Strines Dale [Oldham]	„ „	5	4 0	800 T	35·22	210
† Marsden (Standedge)	E. Greenwood, Esq....	8	2 0	1150 T	50·25	...
Ackworth School	W. B. Fletcher, Esq....	5	1 6	135	17·96	157
Snaith (Balne Vicarage)	Rev. T. S. Ackland ...	5	1 6	25 ⊼	23·84	162
D Goole	T. Kendall, Esq.....	11	3 4	...	15·28	143
† Meltham (Harden Moss)	J. B. Abbey, Esq.....	8	1 0	1200 T	48·44	...
† „ (Grange)	„ „ „	8	1 0	925 T	38·76	...
D Saithwaite (Blackmoorfoot)	J. Stanway, Esq.	8	1 0	800	35·05	199
Goscar (Bank Field)	J. E. Ramsden, Esq....	5	0 8	400 T	38·61	191
Longwood (Bilberry Edge)	J. B. Abbey, Esq.....	8	1 0	1100	40·33	...

DIVISION IX.—YORKSHIRE—(*continued*).

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground.	Height Above Sea Level	Depth of Rain. 1874	Days on which .01 or more fell.
			ft. in.	feet	inches.	
WEST RIDING—(*con.*)						
D †Huddersfield (Dalton)	J. W. Robson, Esq.	8	1 0	350 ⇈	25·60	177
Rastrick	A. Clay, Esq.	5	1 3	410	24·77	188
Todmorden (Stansfield Hall)	J. Fielden, Esq., M.P.	8	1 10	582 ⇈	52·81	225
†Halifax (Warley Moor)	J. E. Lambert, Esq.	7	0 6	1425	40 20	...
† „ (Well Head)	J Waterhouse, Esq. F.R.S	7	1 0	527 ⇈	39·77	...
† „ (Victoria)	J. E. Lambert, Esq.	5	1 0	795	37·88	...
† „ (Gibbett)	„ „ „	5	5 0	568	36·08	...
† „ (Ramsden Wood)	„ „ „	8	1 2	816	44·48	...
† „ (Moorside)	L. J. Crossley, Esq.	8	1 0	429	31·21	181
† „ (Midgley Moor)	J. E. Lambert, Esq.	7	0 6	1350	42·50	...
† „ (Ovenden Moor)	„ „ „	7	0 6	1375	39·90	...
† „ (Walshaw Dean)	„ „ „	8	0 3	1380	44·20	...
† „ (Ogden)	„ „ „	8	1 3	990	36·18	...
Batley	J. Hildred, Esq.	7	1 0	275 ⇈	20·70	...
„ (Corporation W. W.) *upr.g.*	J F Bateman Esq F.R.S.	...	...	1488	50·90	...
„ („ „) *lwr.g.*	„ „ „	...	...	917	50·40	...
D Wakefield (Stanley Vic.)	Rev. R. Burrell	5	1 0	100	18·30	181
Methley Park	J. Richardson, Esq. C.E.	5	0 9	98	19·16	133
D South Milford Rectory	Rev. F. J. Young	5	1 4	60 ⇈	20·56	175
D Bradford (Mechanics' Institute)	C. Lund, Esq.	5	75 0	400 ⇈	23·56	167
„ (The Exchange)	J McLandsborough Esq	8	65 6	432 ⇈	23·56	161
„ (Westgate Hill)	E. Mirfield, Esq.	5	2 6	...	24·36	...
„ (Stubden)	C. Gott, Esq., C.E.	8	1 0	1075	52·21	235
„ (Doe Park)	„ „	8	0 9	810 ⇈	43 61	221
„ (Chellow Dean)	„ „	10	5 0	650 ⇈	27·90	139
„ (Queensbury)	W. Foster, Esq.	5	5 4	1050 ⇈	35·03	174
„ (Heaton Res.)	C. Gott, Esq., C.E.	8	1 0	530	31·85	139
Leeds (Leventhorpe Hall)	J. T. Leather, Esq. C.E	10	3 6	94 ⇈	18·82	...
† „ (Holbeck)	Messrs. Marshall & Co.	10	32 0	127 ⇈	18·85	128
D „ („)	„ „ „	5	1 8	95 ⇈	20·18	169
„ („ W. Works Depot)	E. Filliter, Esq, C.E.	8	0 9	93 ⇈	21·55	172
„ (Woodhouse Moor)	„ „ „	8	0 9	307 ⇈	22·26	176
D „ (Roundhay Elmete Hall)	J. Kitson, Esq.	5	1 0	400	22·70	203
D „ (Weetwood Hall)	H. C. Marshall, Esq.	5	0 7	400 ⇈	21·68	208
„ („ Reservoir)	E. Filliter, Esq., C.E.	8	0 9	328 ⇈	20·43	172
D „ (Allerton Hill)	T. Fenwick, Esq., C.E.	5	0 7	418 ⇈	20·10	155
D „ (Crag Hill, Horsforth)	James Fox, Esq., C.E.	5	0 10	350 ⇈	24·40	210
„ (Eccup)	E. Filliter, Esq., C.E.	8	0 9	340	22·97	182
D Bashall Lodge [Clitheroe]	W. Garnett, Esq.	5	1 10	217 ⇈	56·15	201
Harewood (Arthington)	E. Filliter, Esq., C.E.	8	0 9	139 ⇈	23·13	181
D Thornton-in-Craven	T. Wilson, Esq.	5	5 4	456 ⇈	40·96	236
D Ilkley (Ashburn)	J. I. Dymond, Esq.	8	0 8	400	35·20	201
Slaidburn (Whiteholme)	Mrs. Birchall	5	1 3	475 ⇈	59·45	185
Wetherby (Ribston)	Mr. Jones	5	1 4	...	24·18	...
York (Phil. Soc. Gardens)	C. Wakefield, Esq.	8	1 9	53 ⇈	21·04	169
† „ (Cherry Hill)	H. Richardson, Esq.	5	1 4	50	22·28	...
„ (Bootham)	J. F. Fryer, Esq.	5	0 6	50 ⇈	23·14	...
D Otterburn-in-Craven	W. Gomersall, Esq.	5	1 0	510 ⇈	47 54	151

DIVISION IX.—YORKSHIRE—(*continued*).

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground	Height Above Sea Level	Depth of Rain. 1874	Days on which ·01 or more fell.
			ft. in.	feet.	inches	
WEST RIDING—(*con.*)						
Harrogate	J. Coupland, Esq.	8	0 6	380 T	26·38	163
Barden Reservoir	C. Gott, Esq., C.E.	8	1 2	746 R	43·52	207
Settle	J. Hargraves, Esq.	5	1 6	525 R	42·51	...
D† „ (Langcliffe)	Miss M. I. Sedgwick	8	1 9	623 T	47·75	206
Pateley Bridge (Grimwith Res.)	C. Gott, Esq., C.E.	8	1 0	890 R	45·16	194
D „ „ (Fog Close Ho.)	E. Warburton, Esq.	5	2 4	431 R	38·58	200
D ℞ „ „ (Castle Stead)	Mr. A. C. Young	5	1 0	410 R	37·09	184
D ℞ Malham Tarn	Mr. Coulthard	5	1 1	1250	58·06	215
D Arncliffe	Rev. W. Boyd	8	2 9	750 T	64·87	231
Ingleborough	J. Farrer, Esq.	10	6 2	...	43·17	...
Ripon (Littlethorpe)	Mrs. Swire	5	1 0	70 T	24·07	150
D „ (North Lodge)	F. D. Wise, Esq.	5	1 0	120	24·18	...
D Hubberholme (Buckden)	Rev. W. R. Metcalfe	10	2 7	800	66·91	222
Wharfedale (Oughtershaw Hall)	C. H. L. Woodd, Esq.	8	2 0	1250	69·37	...
„ („ Swarthghyll)	„ „	8	1 10	1350	73·10	...
Dent (Stone House)	Mrs. Nixon	5	1 5	800	69·92	194
D Sedbergh (Thorne Hall)	Miss Elam	5	1 1	400 T	58·52	229
EAST RIDING.						
D Patrington	W. B. Pugh, Esq.	5	0 3	10 R	18·49	168
D† Hull (York Parade, Beverley Rd.)	J. Smith, Esq.	8	3 10	11 T	20·19	176
D „ (People's Park)	Mr. E. Peak	5	0 6	6	21·54	180
D „ (Derringham)	W. Lawton, Esq.	5	1 0	9 R	19·29	165
D Cottingham	J. H. Hill, Esq.	8	1 6	27 T	19·72	170
D Beverley (Alexandra Terrace)	T. Dyson, Esq.	12	8 0	62 R	18·45	148
Thorganby (Thicket Priory)	Miss M. C. D. Jefferson	6	1 4	26 T	19·47	...
D Hornsea (East Gate House)	J. A. Wade, Esq.	5	3 2	35	19·03	112
D Market Weighton (Holm-on-the-Wolds)	Mrs. Harland	5	4 0	150	19·74	...
„ „ (Middleton)	H. D. Blanchard, Esq.	5	1 6	150 T	22·27	117
D Pocklington (Warter)	J. Coxon, Esq.	5	1 10	230 T	26·33	184
D „ (Gt. Givendale)	Miss Singleton	5	4 3	473 R	27·87	...
Lowthorpe (The Elms)	H. Onslow Piercy, Esq.	5	1 0	63 R	22·24	175
D Langton [Malton]	Rev. A. Shadwell	10	1 0	150 R	21·13	159
Ganton Hall [Scarborough]	Mr. Boult	5	1 0	250 B	24·09	150
NORTH RIDING.						
Flaxton Grange	H. Richardson, Esq.	5	1 5	90	19·68	...
†Malton	H. Hurtley, Esq.	10	1 0	75 T	23·19	...
℞*Filey Reservoir	Mr. D. Philliskirk	5	0 9	183	21·00	102
D Bedale (Thorpe Perrow)	Mr. W. Culverwell	5	1 6	172	22·82	152
†Wensleydale (Hestholme)	Rev. F. W. Stow	5	1 0	465 R	34·25	...
D† „ („)	„ „ „	5	0 6	465 R	34·85	189
Leyburn (Wensley)	G. W. Wray, Esq.	7	2 3	650 R	27·90	...
℞*Northallerton	Dr. Hodgson	5	1 3	133 T	21·92	...
Catterick (Tunstall)	H. C. Marshall, Esq.	5	1 0	350	19·56	...
D Grosmont	H. B. Dunn, Esq.	5	1 0	185 T	34·72	...
D Lockwood Beck Res.	W. I'Anson, Esq.	...	1 0	632	26·06	185
Whitby (North Lighthouse)	Rev. F. W. Stow	5	1 0	198 T	22·82	...

DIVISION IX.—YORKSHIRE—(*continued*).

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground. ft.	in.	Height Above Sea Level feet.	Depth of Rain. 1874 inches.	Days on which ·01 or more fell.
NORTH RIDING—(*con.*)							
Whitby (Ruswarp)	C. S. Wake, Esq.	5	1	6	7 T	22·91	...
D Ba* ,, (Guisbro' Road)	M. Simpson, Esq.	5	2	0	184 R	23·91	181
Richmond (Barningham Park)	S. Milbank, Esq.	10	1	2	650	28·77	...
D Greta Bridge (Thorpe Grange)	Miss Dodgson	5	0	10	434	24·94	114
D Redcar (Easington Rect.)	Mr. T. Brayshow	5	1	3	600	22·56	...
Middlesboro' (Grey Towers)	W. R. J. Hopkins, Esq.	8	1	6	317 R	19·48	...
,, (Marton Hall)	H.W Bolckow,Esq.MP	8	1	8	125 T	19·40	...
Guisborough (Hutton Hall)	J. W. Pease, Esq. M.P.	5	1	0	400	25·55	138
D Middlesboro' (Southfield Villas)	W. Fallows, Esq.	5	1	6	21	18·32	135

DIVISION X.—NORTHERN COUNTIES.

DURHAM.							
D Eaglescliffe [Yarm]	Rev. J. Hull	5	1	0	80 R	20·95	159
Darlington (Dinsdale Rect.)	Rev. J. W. Smith	5	1	0	54	20·53	...
,, (Cleveland Parade)	S. Hare, Esq.	5	4	6	140	21·52	...
D ,, (Brinkburn)	Mr. H. Ward	...	1	0	80	20·90	...
Whorlton	Rev. A. W. Headlam	6	0	8	400 T	27·38	...
D Gainford	A. Atkinson, Esq.	5	1	1	250 R	25·98	180
D Sedgefield	R. Smith, Esq., M.D.	5	0	9	360	22·40	164
Hartlepool (Hurworth Burn)	T. Fenwick, Esq., C.E.	8	0	7	360	19·00	146
,, (Hart Reservoir)	,, ,, ,,	8	0	9	164	20·32	147
,, (Heugh Lt. House)	J. Howkins, Esq., C.E.	5	0	3	30	22·48	173
D Wolsingham	A. Mitchell, Esq.	5	1	0	464 R	29·59	170
D Durham Observatory	G. A. Goldney, Esq.	12	4	6	340 R	33·05	175
D ,, (S. Cuthbert's Col. Ushaw)	Rev. Dr. Gillow	5	0	10	600 R	23·72	169
Seaham Hall	Mr. R. Draper	5	1	0	80	24·91	...
,, (Vicarage)	Rev. A. Bethune	5	0	4	80 T	25·03	108
D Sunderland (W. Hendon House)	T. W. Backhouse, Esq.	5	1	0	132 R	22·89	...
,, (,, ,, *New gauge*)	,, ,, ,,	5	1	0	132 R	22·85	...
,, (St. Bede's Terrace)	J. W. Mounsey, Esq.	5	0	6	105 T	22·36	...
Chester-le-Street (Birtley)	R. C. Clephan, Esq.	5	0	9	205 R	24·08	199
D Gateshead (Eighton Cottage)	T. M. Favell, Esq., C.E.	5	0	10	515 T	25·70	114
NORTHUMBERLAND.							
Allenheads	T. Kidd, Esq.	8	0	4	1353 T	45·84	211
D Bywell	Mr. J. Dawson	8	0	6	87 T	30·34	221
Haltwhistle (Unthank Hall)	Rev. Dixon Brown	5	0	9	380	39·54	187
D Newcastle (Rye Hill)	Robert Foster, Esq.	8	1	6	200	21·40	142
,, (Philos. Soc.)	W. Lyall, Esq.	8	1	5	105 T	22·42	111
D ,, (Town Moor)	Mr. W. Neill	5	0	6	201 R	24·82	159
North Shields (Wallsend)	J. W. Dees, Esq.	10	0	6	100 T	23·32	...
D† ,, (Rosella Place)	R. Spence, Esq.	8	1	0	126 R	21·03	167
D ,, (Low Lights)	J. R. Procter, Esq.	8	3	4	22 R	21·16	147
D ,, (Tynemouth)	P. J. Messent, Esq.	5	2	8	65 R	19·55	155
D ,, (Clementhorpe)	J. R. Procter, Esq.	5	1	0	155 T	20·97	162

DIVISION X.—NORTHERN COUNTIES—(*continued*).

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground	Height Above Sea Level	Depth of Rain. 1874	Days on which .01 or more fell.
			ft. in.	feet.	inches.	
NORTHUMBERLAND—(*con.*)						
*North Shields (Whitley)	Rev. R. F. Wheeler	5	3 0	82 ⇈	18·29	115
D „ („ Convalescent Ho.)	C. Roope, Esq.	5	1 0	38	21·26	...
D „ (Earsdon)	John Taylor, Esq.	5	2 10	185 ↑	20·27	128
D Humshaugh	Rev. H. Taylor	5	1 0	230	28·53	182
Bingfield House	J. Coppin, Esq.	5	1 0	445	26·11	155
Stamfordham	Rev. J. F. Bigge	8	1 0	400 ↑	25·32	...
Newcastle and Gateshead W. Works: Whittle Dean	D. D. Main, Esq.	10	...	...	23·73	...
Newcastle and Gateshead W. Works: Hallington	„ „ „	10	0 6	469 ⇈	28·70	...
Newcastle and Gateshead W. Works: „ (Fawcett)	„ „ „	10	0 6	563 ⇈	25·94	...
Newcastle and Gateshead W. Works: North Tyne (Green Crag)	„ „ „	10	0 6	800 ⇈	31·37	...
Newcastle and Gateshead W. Works: „ „ (Valley)	„ „ „	10	0 6	300	26·38	...
Newcastle and Gateshead W. Works: Gunnerton Burn (Camphill)	„ „ „	10	0 6	676 ⇈	28·03	...
Newcastle and Gateshead W. Works: Swinburn (Woodford)	„ „ „	10	0 6	500 ⇈	27·80	...
Bellingham (Hesleyside)	W. H. Charlton, Esq.	5	0 8	373 ⇈	36·12	162
D Hartburn (Wallington)	H. Laws, Esq, C.E.	5	1 0	398 ⇈	32·94	207
D Morpeth (Meldon Park)	Mr. J. Finlay	5	1 0	...	31·35	176
„ (Cragside)	Mr. W. Bertram	8	1 0	400 ⇈	33·03	...
„ (Cresswell)	Rev. J. E. Leefe	8	1 3	96 ↑	19·55	...
Rothbury (Brenckburn Priory)	C. H. Cadogan, Esq.	5	1 0	300 ⇈	29·77	143
„ (Whitton Tower)	Rev. Dr. Ainger	...	1 0	410	32·93	...
Deadwater	Mr. Scott	3	1 6	2000 ↑	51·90	...
Alwinton (Harbottle)	T. Thompson, Esq.	5	1 0	500	31·95	117
Alnwick (Glanton Pyke)	F. W. Collingwood, Esq	8	4 4	517 ↑	25·79	...
D Howick	Earl Grey, K.G.	8	0 10	121 ⇈	24·89	127
Ilderton (Lilburn Tower)	E. J. Collingwood, Esq	10	6 0	300 ↑	24·23	...
Wooler (Middleton Hall)	G. P. Hughes, Esq.	...	1 0	510	27·11	...
Belford (Middleton Hall)	J. T. Leather, Esq. C.E.	10	2 6	240 ⇈	24·20	...
*Wooler (Milfield)	G. A. Grey, Esq.	5	0 6	200 ⇈	25·28	...
CUMBERLAND.						
Whitbeck	Rev. T. Ormandy	2	1 0	...	43·03	...
Bootle Rectory	Rev. A. Wilkin	8	1 0	87 ⇈	42·84	184
Whitehaven (Braystones)	J. D. Watson, Esq	10	3 8	36 ↑	37·84	...
†Seathwaite (11)	Mr. Birkett	4	0 6	422 ↑	148·29	...
† „ *daily* (11)	„ „	5	1 0	422 ↑	148·79	222
„	„ „	8	1 0	422 ↑	145 00	...
D St. Bees	W. C. Hughes, Esq.	8	0 6	100	42·62	149
† Wythburn Vicarage...*monthly*(20)	Rev. Basil Lawson	8	1 0	574 ↑	100·75	...
Helvellyn (Birkside)	G. J. Symons, Esq.	8	1 0	1800 ↑	111·00	...
†Watendlath (13)	„ „ „	8	1 0	867 ↑	83·00	...
D†Keswick (Barrow House) (46)	S. Z. Langton, Esq.	8	0 6	282 ⇈	80·72	229
D Whitehaven (The Barracks)	Capt. Morris Fawcett	5	1 1	21 ⇈	43·34	191
Loweswater (Waterend)	Mrs. Jackson	5	0 8	432 ↑	62·98	226
†Hallsteads (36)	A. Marshall, Esq.	10	4 0	490 ↑	63·60	...
†Gowbarrow Fell (29)	G. J. Symons, Esq.	8	1 0	1100 ↑	59·25	...
Matterdale Common	„ „ „	8	1 0	...	63 25	...
D†Keswick (Deer Close) (47)	H. C. Marshall, Esq.	7	1 9	300 ↑	67·25	218
D† „ (Derwent Island) (14)	„ „ „	5	0 7	280 ↑	57·64	221

DIVISION X.—NORTHERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground. ft.	in.	Height Above Sea Level feet.	Depth of Rain. 1874 inches	Days on which 01 or more fell.
CUMBERLAND—(*con.*)							
D† Keswick (Post Office) ....(16)	Mr. Crosthwaite	8	6	4	270 T	67·03	211
DBA* „ „ ...(16)	„ „	5	1	0	270 T	65·89	213
† „ (Brow Top)	Mr. T. Barker	5	0	8	407 T	66·84	215
D† „ (Shu-le-crow)	H. Dawson, Esq.	12	3	0	278 T	67·26	200
D Blencowe School.....	T. Fawcett, Esq.	8	0	9	601 B	46·66	221
D† Bassenthwaite (Mirehouse).....	Mrs. Spedding	5	0	7	310 T	54·14	220
D Cockermouth (Whinfell Hall) ...	W. Robinson, Esq. ...	5	2	0	265 T	58·14	220
Workington (Stainburn)	C. Litt, Esq.	8	0	6	100 T	42·68	203
D Cockermouth	Dr. Dodgson	5	0	6	144 T	46·31	200
D „ (Higham)	T. A. Hoskins, Esq. ...	6	0	6	478 T	51·97	219
D „ (BroughtonGrange)	G. S. Wilson, Esq. ...	5	1	3	202 T	47·24	211
D Maryport (Netherhall)	H. P. Senhouse, Esq...	8	0	6	27 T	38·53	181
D „ (Brookfield)	M. Lidbetter, Esq. ...	5	0	9	124	40·20	211
D Silloth (The Rectory)	Rev. F. Redford.....	8	3	0	28 T	36·01	181
D† Carlisle (Cemetery)	Mr. T. Bell.....	8	0	8	114 T	35·73	176
D† „ (Scotby)	F. E. Sutton, Esq.....	8	5	5	140 T	31·36	162
„ (English Street).....	Mr. J. A. Whealey ...	5	54	0	138	30·19	...
D „ (Scaleby Hall)	R. A. Allison, Esq. ...	5	1	0	112 T	40·51	193
Kirkandrews-on-Esk Rectory ...	Rev. F. Taylor	5	0	6	100 T	42·04	...
WESTMORELAND.							
D Kirkby Lonsdale (Casterton).....	S. Morris, Esq.	8	1	0	305 T	50·84	220
„ „ („ *monthly*)	„ „	8	1	0	305 T	50·11	...
„ „ (Biggins House)	Miss Tomlinson.....	12	3	6	400	46·30	...
„ „ (Whelprigg) ...	Mrs. Gibson	5	4	6	475	50·04	208
„ „	Mr. W Harrison	5	1	2	209	47·45	...
D Churchtown (Crosthwaite)	W. Garnett, Esq.	5	1	3	150 T	58·00	223
D Kendal (Kent Terrace)	R. J. Nelson, Esq.....	5	1	6	146	55·11	193
„ (Highgate).....	E. Hayton, Esq.	8	5	0	180 T	56·51	207
D „ (Underfell)	J. J. Wilson, Esq.....	8	4	0	300 T	56 60	200
D „ (Hawesmead)	G. Braithwaite, jn..Esq.	8	0	6	176 T	56·77	220
D Stavely (Reston Hall)	F. K. Atkinson, Esq...	10	3	0	...	72·45	224
Bowness (Matson's Grounds).....	G. Healey, Esq.....	12	0	8	451 T	70·02	235
D Windermere (The Wood)	G. B. Crewdson, Esq..	8	3	2	322 T	70·41	214
D Ambleside (Brathay Vic.).....	Rev. H. S. Callender...	5	1	3	150 T	85·65	236
Ravenstonedale (Brownber).....	J. Fothergill, Esq. ...	5	3	1	835 T	51·02	205
D Little Langdale (Bridgend)..(49)	E. B. W. Balme, Esq..	...	0	9	385	107·53	223
D Elterwater (Woodlands).....(50)	E. Tucker, Junr., Esq.	5	0	9	244 T	101 60	231
Ambleside (Lesketh Howe)...(26)	F. M T. Jones, Esq....	5	2	6	175 T	95·74	...
D† Grasmere (High Close).....(22)	E. B. W. Balme, Esq...	8	0	9	553	88·03	232
D* Kirkby Stephen	T. Mason, Esq.	5	1	0	574 T	45·51	185
† Kirkstone Pass.....(31)	G. J. Symons, Esq. ...	5	1	0	500 T	115·33	...
† Grasmere (Easedale Tarn)...(45)	„ „ „	8	1	0	1175 T	107·75	...
† Haweswater(Mardale Green)(40)	„ „ „	8	1	0	800 T	100·50	...
† CrosbyRavensworth.....(55)	Rev. G. F. Weston ...	8	1	0	600 T	52·44	169
D† „ „ (Reagill)(54)	Mr. W. Wilkinson ...	8	0	6	890 T	48·40	207
† Haweswater(Measandbecks) (41)	G. J. Symons, Esq. ...	8	1	0	1200 T	56 75	..
† Patterdale Hall ..... (33)	Mr. Rae	7	2	0	490 T	94·6	...

DIVISION X.—NORTHERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Rain Gauge. Height Above Ground.	Rain Gauge. Height Above Sea Level	Depth of Rain. 1874	Days on which .01 or more fell.
			ft. in.	feet.	inches.	
WESTMORELAND—(*con.*)						
†Patterdale Hall (Greenside Mine)	T. Taylor, Esq.	7	1 6	1000 T	108·92	166
D Appleby	Dr. Armstrong	8	1 0	442 T	39·02	180
Ullswater (Martindale) .....(52)	Rev. S. Golding	...	...	...	86·43	...
† „ (Swarth Fell).....(39)	G. J. Symons, Esq. ...	8	1 0	1000 T	57·50	...
„ (Sharrow Bay) *monthly*(38)	A. Parkin, Esq.....	5	0 7	500	53·19	...
„ („ „)	„ „ „	8	1 6	500	49·00	...
†Great Strickland [Penrith] (44)	H. Plumer, Esq.....	5	1 0	650 T	45·34	233
D Lowther Castle [Penrith].....	Mr. W. Shand	...	3 6	750 T	43·26	203
†Brougham Hall [Penrith].....	Mr. G. Campbell	5	5 5	470 T	36·15	150

DIVISION XI.—MONMOUTH, WALES, AND THE ISLANDS.

MONMOUTH.						
D Newport (Springfield)	G. B. Gething, Esq.	5	1 0	180	41·59	170
*Llanfrechfa Grange	F. J. Mitchell, Esq. ...	5	4 0	326 ⊼	45·39	146
Caerleon (Lansor)	J. James, Esq.	5	1 10	...	38·30	157
D Chepstow (Piercefield Park).....	H. Clay, Junr., Esq....	5	1 6	300 ?	41·27	163
Usk (The Priory)	D. Lawrence, Esq. ...	8	3 10	...	33·73	...
Rhymny House	„ „ ...	...	...	...	56·00	144
Tredegar (Ebbw Vale)	R. Jordan, Esq.....	5	1 5	918	56·24	145
„ (Sirhowy)	J. N. James, Esq.....	5	1 0	1088	45·02	128
Monmouth (Dingestow).....	S. R. Bosanquet, Esq.	5	1 0	250 ?	28·32	...
„	W. A. Willis, Esq. ...	6	1 0	.	28·72	124
D Abergavenny (Larchfield).....	Dr. McCullough	5	1 0	220 B	33·09	169
GLAMORGAN.						
*Cowbridge (The Ham)	G. W. Nicholl, Esq ...	8	1 3	50 ?	29·58	...
D „ (Ash Hall)	D. Owen, Esq.	8	1 0	160 ?	46·41	187
D Cardiff (Cemetery)	T.L. Johnson, Esq.,C.E.	5	1 0	95 ⊼	45·29	190
D „ (Ely)	T. G. South, Esq. C.E.	5	3 0	45	43·16	169
D† „ (Crockherbtown)	W. Adams, Esq.	5	1 0	35 ⊼	37·38	177
D† „ (Pentyrch)	F. G. Evans, Esq.....	5	1 1	100 T	49·00	193
„ (Lisvane)	T. G. South, Esq. C.E.	5	2 0	142	41·89	181
D Swansea (South Dock Lock).....	J. W. James, Esq.....	12	14 9	40 ⊼	36·30	178
Neath	E. R. Morgan, Esq. ...	5	1 0	26 ⊼	53·54	177
Abercare (Treherbert)	W. T. Lewis, Esq. C.E	5	1 0	634 ⊼	94·61	...
„ (Mardy)	„ „ „	5	1 1	431 ⊼	65·13	171
D „ (Abernant).....	E. Jones, Esq.	6	1 6	425 T	63·60	103
MerthyrTydfil (Thomas Town)...	T. J. Dyke, Esq.....	5	4 0	550 ⊼	49·93	176
D Ystalyfera	Dr. D. Thomas	8	1 2	250	68·35	156
CARMARTHEN.						
D†Carmarthen (Gaol)	G. Stephens, Esq.....	8	0 6	92 ⊼	53·63	210
D† „ (Joint Co. Asylum).	Dr. Hearder	8	0 6	180	55·58	204
Llandilo (Golden Grove)	Rt.Hon ViscountEmlyn	6	0 6	...	59·18	232
Dynevor Castle	Rt. Hon. Lord Dynevor	8	1 0	236 T	53·39	206
Narberth (Tegfynydd)	H. S. Morgan, Esq. ...	5	1 0	158	51·56	130

DIVISION XI.—MONMOUTH, WALES, AND THE ISLANDS—(*continued*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground. ft.	in.	Height Above Sea Level feet.	Depth of Rain. 1874 inches.	Days on which '01 or more fell.
PEMBROKE.							
Pembroke (Stackpole Court).....	Rt. Hon Viscount Emlyn	5	0	6	60 T	41·85	127
Tenby (Ivy Tower).....	John Leach, Esq.	5	1	0	180	46·62	204
D*Haverfordwest (High Street) ...	E. P. Phillips, Esq. ...	5	1	0	95 T	51·15	166
DSolva	E. Robinson, Esq.....	5	1	0	100 ?	30·69	182
CARDIGAN.							
DLampeter (St. David's College)...	Prof. Scott	8	5	0	425	45·27	...
DAberystwith (Goginan) .....(58)	H. Trenwith, Esq.....	5	2	6	295	46·10	197
D „ (Gogerddan).....	Sir Pryse Pryse, Bt....	5	1	0	80 B	49·30	222
BRECKNOCK.							
Crickhowell (Glanusk Park).....	Mr. Ireland	8	0	6	300 ?	39·01	...
DBrecknock	J. Kirk, Esq.....	5	2	0	437 ⅄	38·50	154
D „ (Watton Mount).....	G. Overton, Esq.	5	4	6	450 T	38·06	...
RADNOR.							
DRhayader (Nantgwillt) .....(70)	R. L. Lloyd, Esq.....	5	1	0	767 B	63·09	217
D†Heyhope Rectory.....	Rev. W. W. Griffith...	5	1	0	690 T	35·74	145
MONTGOMERY.							
†Llanidloes (Ystrad-olwyn-fawr).	Mr. J. Jones	8	1	0	950	59·30	...
† „ (Dolenog) .....(69)	T. F. Roberts, Esq. ...	5	2	0	550 ⅄	49·00	166
Newtown (Dolfor)	W. B. Pugh, Esq.....	5	0	3	1027	40·18	190
†Carno (Capel) .....(54)	Mr. D. Thomas.....	8	1	0	550 T	45·00	...
D „ (Tybritle).....	Miss Marsh	...	1	0	...	49·66	211
DMachynlleth (Plas).....(67)	Mr. Johnstone	5	1	0	...	68·93	201
†Garthbibio (Lluest fawr).....(49)	Mr. J Jones	8	1	0	990 T	64·60	...
FLINT							
Treiddyn (Nant-y-ffrith)	T. V. Kyrke, Esq.....	5	1	0	850	34·85	...
Mold (Bryn Alyn)	Rev. R. B. Cooke	5	1	2	483 ⅄	30·08	...
Holywell (Maes y dre)	J. Williams, Esq.	10	5	0	400	22·33	...
St. Asaph (Nantllys) .....(33)	P. P. Pennant, Esq. ...	5	1	0	273 B	27·96	...
DRhyddlan (Bryn Erwyn)	Mr. T. Hutchings.....	5	1	0	150 ?	29·95	179
Prestatyn (Nant)	T. G. Dixon, Esq... ...	5	1	2	30 ?	25·08	...
DENBIGH.							
Ruabon (Wynnstay)	Mr. Middleton	12	3	0	484 T	35·20	198
Wrexham (Plas Power).....	Mr. J. Clark	5	1	0	472 ⅄	32·44	192
„ (Brymbo)	C. E. Darby, Esq.....	6	6	3	632 L	29·34	...
DRosset (Trevalyn Hall).....	Capt. Griffith.....	5	1	0	58 ⅄	23·40	188
DLlannerch Park [St. Asaph]	Whitehall Dod, Esq....	5	1	0	107 ⅄	28·36	192
D „ Gardens [„]	Mr. Cartwright.....	5	1	0	127	30·03	186
DAbergele (Garthewin)	B. W. Wynne, Esq. ...	...	1	0	500 ?	40·14	181
MERIONETH.							
*Dolgelly (National School)...(21)	Major Mathew	5	1	0	43	74·60	224
[illegible]* „ (Brithdir) .....(28)	J. Hill, Esq.	5	1	6	500 ?	76·42	...

DIVISION XI.—MONMOUTH, WALES, AND THE ISLANDS— *continued*).

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground.	Height Above Sea Level	Depth of Rain. 1874	Days on which ·01 or more fell.
			ft. in.	feet.	inches.	
MERIONETH—(*con.*)						
Bala .....(20)	Major Mathew	5	1 0	544	53·48	164
Trawsfynydd ... .(4)	„ „	5	0 7	700	71·57	216
DLlanderfell (Palé Gardens)	Mr. T. Ruddy	...	1 0	620	50·20	205
*Rhiw brifdir.....(15)	Major Mathew	5	10 0	1100	116·56	255
CARNARVON.						
Aberdaron (Sarn).....(22)	Mr. W. Jones.....	12	5 0	340	43·31	198
*Pwllheli (Bodfaen) .....(17)	Major Mathew	5	4 9	80	44·36	198
*Llanystumdwy (Talarvor) ...(16)	„ „	5	3 0	50	?27·42	174
*Llangybi (Cefn) .....(6)	„ „	5	1 1	200	49·53	196
*Port Madoc.....(1)	„ „	5	2 0	10	52·23	178
Beddgelert (Bryn Gwynant) (66)	J. Wyatt, Esq.	9	3 0	264 B	121·58	193
Pen-y-gwryd	Mr. H. Owen.....	8	...	860	149·00	203
Carnarvon (Cocksidia).....(39)	Major Mathew	5	1 1	120	39·41	227
†Llanfairfechan .....(26)	R. Luck, Esq.....	5	0 8	150 B	39·01	138
D†Llandudno(Warwick House)(29)	Dr. Nicol.....	8	0 8	99 B	31·69	178
„ (Great Orme's Head)(64)	R. Price, Esq.	12	6 0	175 ?	27·17	...
ANGLESEA						
DBodewryd	Rev. W. W. Williams	5	1 6	180 B	39·38	234
ISLE OF MAN.						
Calf of Man.....	Bd. of Northern Lights	...	...	...	23·79	...
DDouglas (Derby Square)	P. Killey, Esq.	5	1 1	79	39·46	198
Point of Ayre	Bd. of Northern Lights	...	...	...	24·22	143
SCILLY.						
Scilly	W. P. Dymond, Esq....	8	...	...	34·35	...
JERSEY.						
DMillbrook.....	P. Langlois, Esq.....	5	1 0	50	32·02	169
GUERNSEY.						
DGuernsey (York Place)	Dr. Hoskins, F.R.S....	12	12 0	204 B	35·38	175
D „ (Grange Road)	Dr. Mansell	5	1 0	174 B	36·05	191
SARK.						
DSark Vicarage....	Rev.T.L.V.Cachemaille	5	1 0	340 L	27·58	173

SCOTLAND.

DIVISION XII.—SOUTHERN COUNTIES.

STATIONS	AUTHORITIES.	Rain Gauge. Diameter.	Rain Gauge. Height Above Ground.	Rain Gauge. Height Above Sea Level	Depth of Rain. 1874	Days on which ·01 or more fell.
			ft. in.	feet.	inches.	
WIGTOWN.						
Mull of Galloway	Bd. of Northern Lights	...	...	...	22·52	105
D BA* Wigton (N. Balfern)	T. MacLelland, Esq.	5	0 11	75 ↑	44·71	200
Kirkcowan	A. Buchan, Esq.	...	...	...	53·02	...
Corsewall	Bd. of Northern Lights	...	3 4	22 ?	32·77	158
KIRKCUDBRIGHT.						
Little Ross	Bd. of Northern Lights	...	3 3	130 ?	27·94	147
Twynholm (Cally)	A. Buchan, Esq.	5	...	90	46·78	...
Kirkbean (Woodside Cott.)	Mr. J. Foulds	5	3 0	30 ?	43·68	203
BA* Dalbeattie	J. Grieve, Esq.	5	0 8	60 ?	49·90	216
Newton Stewart	*Dumfries Courier*	...	...	..	44·77	...
Cargen [Dumfries]	P. Dudgeon, Esq.	3	0 4	80 ↑	51·06	174
Irongray (Drum Park)	*Dumfries Courier*	...	...	...	57·80	...
D New Galloway	R. McKay, Esq.	8	20 0	220 ↑	45·59	203
D BA* Carsphairn	J. Hannah, Esq.	5	3 10	574 ↑	61·80	168
DUMFRIES.						
D New Abbey (St. Mary's)	Rev. W. Downie	...	0 4	54	53·83	116
D Annan (Warmanbie)	Mr. Elliot	8	3 0	100	43·00	170
D Dumfries (Crichton Asylum)	Dr. Gilchrist	8	0 6	159 ↑	45·68	196
,, (Ashbank)	T. Corrie, Esq.	...	...	...	46·20	...
Langholm School	J. Little, Esq.	3	0 6	270 ↑	70·30	...
Westerkirk School	,, ,,	3	0 6	420	65·20	...
,, (Carlesgill)	,, ,,	9	1 6	307 ↑	67·20	...
Closeburn (Wallace Hall)	C. T. Ramage, Esq.	3	0 10	207 ↑	38·80	...
D Kirkpatrick Juxta (Broomlands)	Mr. Burgess	3	0 3	346	64·46	132
Durrisdeer (Drumlanrig Castle)	A. Buchan, Esq.	...	...	191	56·23	...
Moffat (Eriestane)	Mr. Welsh	...	...	...	67·50	...
D Sanquhar (Wanlockhead)	Mr. G. Dawson..	3	0 4	1330 ↑	61·16	192
ROXBURGH.						
New Castleton (The Flatt)	J. Elliot, Esq.	3	0 9	350 ↑	60·20	...
,, ,, (Kirndean)	Miss Elliot	3	0 6	400 ↑	54·60	...
Riccarton	Mr. W. Smith	5	1 3	853	50·92	...
D Saughtree	Mr. J. J. Bell	5	4 6	760 ↑	42·62	167
Hawick (Wolfelee)	A. Buchan, Esq.	5	...	604	46·40	...
,, (Goldielands)	Prof. Elliot	3	0 8	500 ↑	35·88	...

DIVISION XII.—SOUTHERN COUNTIES—(*continued*).

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground. ft.	in.	Height Above Sea Level feet.	Depth of Rain. 1874 inches.	Days on which ·01 or more fell.
ROXBURGH—(*con.*)							
Hawick (Kirkton)	Mr. J. Welsh	...	1	0	759 ⅄	37·60	...
D* „ (Silverbut Hall)	Mr. D. Elder	5	4	0	512 ⅄	33·45	182
*Jedburgh (Sunnyside)	G. Hilson, Jun., Esq.	5	7	0	360 ⅄	29·52	125
„ (Timpendean)	T. E. Boag, Esq	...	...		...	29·90	...
St. Boswell's (Elliston)	G. Dalrymple, Esq.	6	1	0	350	30·75	...
D „ (Springwood Park)	Sir G. Douglas, Bt	10	1	0	130	29·32	161
D Melrose (Dingleton Mains)	Miss Turnbull	5	5	0	500 ?	31·97	193
„ (Abbey Gate)	Mr. A. Dodds	5	0	6	280	32·19	225
D Wooplaw [Galashiels]	J. Murray, Esq.	5	1	0	880 ⅄	29·03	201
„ „	„ „	3	1	0	880 ⅄	28·70	201

DIVISION XIII.—SOUTH-EASTERN COUNTIES.

SELKIRK.							
Borthwickbrae [Hawick]	A. E. Lockhart, Esq.	8	0	2	800 ⊺	47·60	...
Bowhill	Mr. Mathison	9	11	0	537	33·11	165
PEEBLES.							
D Glenrath	Mr. S. Linton	5	1	2	764 ⅄	40·59	177
Cairnmuir	A. Buchan, Esq.	12	0	5	1150	42·62	...
D Penicuick (N. Esk Reservoir)	Mr. J. Garnock	11	0	6	1150 ⅄	35·05	158
BERWICK.							
Milne Graden	A. Buchan, Esq.	...		...	103	22·45	...
Coldstream (Swinton Manse)	Rev. R. Home	5	0	10	200 ⅄	29·21	178
D Marchmont House	Mr. P. Loney	5	1	0	500 ⊺	35·92	215
Lauder (Thirlestane Castle)	Mr. J. Whitton	3	0	3	558 ⊺	28·33	...
Dunse (Mungo's Walls)	Mr. J. Thomson	3	0	6	267	26·90	174
St. Abb's Head	Bd. of Northern Lights	...	0	4	211 ?	22·06	117
HADDINGTON.							
Yester	A. Buchan, Esq.	12	1	0	425	32·09	...
Haddington (Millfield)	Mr. T. Dods	6	4	0	140 ⊺	23·44	...
Tranent (Tyneholme)	A. Buchan, Esq.	...	...		284	26·54	...
Dunbar (Thurston)	„ „	6	4	0	327	25·04	...
D East Linton	Mr. J. Storie	3	0	3	90 ⊺	27·47	160
North Berwick (Seacliffe)	A. Buchan, Esq.	8	5	0	80	21·34	...
EDINBURGH.							
Cobbinshaw Reservoir	A. Buchan, Esq.	6	0	7	863	33·70	...
Glencorse	W. H. Cameron, Esq.	...	0	6	787	35·85	138
Harlaw	„ „ „	...	...		...	35·80	...
Clubbiedean	„ „ „	...	...		...	35·60	...
Swanston	„ „ „	...	0	6	555	31·50	...
Colinton (Fernielaw)	J. Leslie, Esq., C.E.	11	0	6	500	32·00	...

DIVISION XIII.—SOUTH-EASTERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground.	Height Above Sea Level	Depth of Rain. 1874	Days on which ·01 or more fell.
			ft. in.	feet.	inches.	
EDINBURGH—(*con.*)						
Colinton (Bonally)	W. H. Cameron, Esq...	...	..	...	36·40	...
†Dalkeith	A. Buchan, Esq.	4	0 4	183	23·30	...
Ratho (The Villa)	T. Sheriff, Esq., M.D..	...	0 2	...	27·19	...
,, (Bonnington)	,, ,, ,,	3	1 0	405	28·90	...
DInveresk	Mr. McAuslane	9	2 0	60 T	26·27	138
Edinburgh (Charlotte Square)...	J. Leslie, Esq., C.E. ...	11	0 6	230	25·76	...
,, (,, ,,)...	,, ,,	12	63 0	300	19·16	...
Costorphine (Meadowfield)	Miss Paterson	8	9 4	155 T	23·71	...
LINLITHGOW.						
Linlithgow (Rockville)	A. Buchan, Esq.	5	0 4	...	30·13	...
Abercorn	Rev. D. Playfair .,...	5	0 10	130	27·56	...

DIVISION XIV.—SOUTH-WESTERN COUNTIES.

LANARK.						
DBiggar (Cambus Wallace)	Captain Paul	6	0 6	748 T	31·43	192
DDouglas (Newmains)	Mr. J. Russell	3	0 4	783 ⅄	41·83	188
DLanark (Baronald)	Captain Thornton	5	1 0	505 ⅄	33·23	181
,, (Garrion Tower)	J. M. Mackenzie, Esq.	...	0 6	150	35·74	...
D ,, (Ridge Park)	C. Lindsay, Esq.	5	0 4	634 ⅄	32·20	169
DCarnwath	Mr. W. Currie	3	0 1	700 ⅄	33·61	168
Hamilton (Auchinraith)	R. Ker, Esq.	10	4 9	150 ?	31·02	...
,, (Bothwell Castle)	Mr. A. Turnbull	10	18 0	146 T	32·66	181
Cambuslang (Bushy Hill)	Dr. Muirhead	6	0 10	147 ⅄	38·48	207
DGlasgow (Cessnock Park)	R. Hart, Esq.	10	4 4	29 ⅄	38·72	212
D ,, (Observatory)	Professor Grant, F.R.S.	5	0 1	180 ⅄	42·36	228
DAirdrie (Hillend House)	Mr. W. Ritchie	6	4 8	620 ⅄	39·46	113
AYR.						
DGirvan (Pinmore)	Hugh Hamilton, Esq..	5	1 0	187 T	52·04	207
,, (Turnberry)	Bd. of Northern Lights	...	...	...	35·84	136
D[illegible]Patna (Hole House)	Mr. P. Murdoch	5	1 0	446 ⅄	44·46	199
New Cumnock (Whitehills)	W. Lennox, Esq.	5	1 0	860 ⅄	50·38	217
Ayr (Auchendrane House)	A. Buchan, Esq.	...	...	97	43·49	...
DOld Cumnock	J. Ballantine, Esq	5	1 3	380 ⅄	43·89	213
D[illegible]Muirkirk (Irondale House)...	J. Wilson, Esq.	5	1 0	745 ⅄	51·49	210
Kilmarnock (North Craig)	J. M. Gale, Esq., C.E.	12	0 6	310	38·83	...
,, (Annanhill)	W. H. Dunlop, Esq. ..	10	0 10	165 ⅄	38·70	206
Largs (Mansfield)	Mr. McMaster	10	0 6	30	42·50	...
Skelmorlie (Morland)	A. Buchan, Esq.	...	...	100	51·70	..

DIVISION XIV.—SOUTH-WESTERN COUNTIES—(*continued*).

	STATION.	AUTHORITIES.	Rain Gauge. Diameter.	Height Above Ground. ft.	in.	Height Above Sea level feet.	Depth of Rain. 1874 inches.	Days on which ·01 or more fell.
	RENFREW.							
	Mearns (Newton)	P. R. Murdoch, Esq.	5	1	0	350	55·40	...
	,, (Netherplace)	W. Mather, Esq.	...	1	0	360	56·56	...
Gorbals's Dist.	Ryat Lynn	‡Glasgow Water Works	8	0	5	310	49·30	172
Gorbals's Dist.	Waulk Glen	,, ,, ,,	12	0	5	280	48·35	176
Gorbals's Dist.	Middleton	,, ,, ,,	12	0	5	550	58·45	...
Gorbals's Dist.	Nither Cairn	,, ,, ,,	...	...		700	62·25	...
Paisley W. Works	Stanely Reservoir	Robert Sharp, Esq.	12	1	0	190	48·14	...
Paisley W. Works	Back Thornlymuir	,, ,,	12	1	0	646	52·02	...
Paisley W. Works	Muirhead	,, ,,	11	1	0	482 ⅄	58·74	...
Paisley W. Works	Springside	,, ,,	11	1	0	532	58·74	...
	Paisley (Ferguslie House)	Mr. A. Leishman	3	0	3	85	44·85	155
	Shaws W. Works (Loch Thom)	J. Wilson, Esq., C.E.	6	1	0	643 ⅄	69·30	...
	,, ,, (Shiel Hill)	,, ,,	6	0	9	962 ⅄	64·50	...
	,, ,, (Mansfield)	,, ,,	5	1	0	580 ?	63·58	243
	,, ,, (Spango Burn)	,, ,,	6	0	9	757 ⅄	60·90	...
D	Greenock (Hole Glen)	,, ,,	5	1	0	603 ⅄	62·57	233
	,, (Glenbrae)	,, ,,	6	0	9	574 ⅄	65·00	...

DIVISION XV.—WEST MIDLAND COUNTIES.

	DUMBARTON.							
D	Cardross (Kilmahew Castle)	J. W. Burns, Esq.	8	0	6	96 ⅄	40·73	208
	Auchendennan	A. Buchan, Esq.	...	...		...	56·50	...
	Helensburgh	J. M. Gale, Esq., C.E.	...	...		295	51·53	167
	Loch Lomond (Balloch Castle)	A. J. D. Brown, Esq.	7	0	4	91 ⅄	55·07	222
	Loch Long (Arddaroch)	J. White, Esq.	5	0	10	80	84·22	177
BA	,, (Arrochar)	Rev. J. Dewar	5	0	9	10	96·62	...
	STIRLING.							
	Strathblane (Mugdock Reservoir)	Glasgow Water Works	8	0	6	320	41·80	108
	Falkirk (Kerse)	Earl Zetland	8	1	0	...	34·30	...
	,, (Arnott Hill)	A. Buchan, Esq.	5	1	6	135	36·95	...
	Stirling (Polmaise Gardens)	Mr. Gorrie	6	0	9	12	37·60	...
	Ben Lomond	Glasgow Water Works	...	...		1800	85·60	...
	BUTE.							
	Arran (Pladda)	Bd. of Northern Lights	...	3	3	55 ?	40·63	180
BA	,, (Sannox Manse)	Rev. J. Blacklock	5	0	7	14 L	63·78	...
	ARGYLL—(MAINLAND.)							
D	Castle Toward	Mr. Seth	6	4	0	65	49·59	204
	Lochgilphead (Kilmory) *Thom's g.*	Sir J. P. Orde, Bart	6	0	4	100	65·60	242
D	,, (,,)	,, ,, ,,	5	0	4	100 ?	70·88	232
	,, (Auchnaba)	Captain Orde	5	1	0	40	51·99	241

‡ Information supplied by J. M. Gale, Esq., C.E.

DIVISION XV.—WEST MIDLAND COUNTIES—(*continued*).

STATION.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which .01 or more fell
		Diameter	Height Above Ground.	Height Above Sea level	1874	
			ft. in.	feet.	inches.	
ARGYLL—(MAINLAND)—(*con.*)						
D Lochgilphead (Callton Môr)	Mr. J. Russell	3	4 0	65	59·30	261
Inveraray Castle	Mr. J. Caie	6	0 2	30	77·00	...
BA Dalmally	J.B.Lawes,Esq.,F.R.S.	5	1 0	200 ?	96·41	239
BA Loch Awe	,, ,,	5	...	100 ?	98·40	213
Morven(Beach)	R. Macfie, Esq.	6	0 6	...	81·30	...
Appin (Aird's)	,, ,,	6	0 3	38 T	66·50	...
,, (,,)	,, ,,	5	0 3	15	67·20	...
D Loch Sunart (Glenborrodale)	J. J. Dalgleish, Esq.	5	0 2	60 L	66·73	223
Ardnamurchan	Bd. of Northern Lights	...	3 6	82 ?	53·44	217
Loch Eil (Corran)	,, ,,	...	0 4	14 ?	63·15	170
ARGYLL—(INSULAR.)						
Cantire, Mull of	Bd. of Northern Lights	...	...	279 ?	36·14	110
,, (Campbeltown Devaar)	,, ,, ,,	...	3 4	75 ?	43·71	191
,, (Skipness Castle)	Mrs. Graham	6	1 6	20 L	54·10	...
D ,, (Tarbert, Stonefield)	Colin G. Campbell, Esq.	3	1 3	90	80·52	212
D BA Islay (Ardbeg)	Mr. C. Hay	5	1 0	7 ?	50·56	253
,, (Rhinns)	Bd. of Northern Lights	...	3 0	74 ?	34·36	169
,, (Lochindaul)	,, ,, ,,	...	...	...	46·85	152
D* ,, (Eallabus)	R. Ballingal, Esq.	5	1 0	67 L	50·23	243
,, (Bowmore)	D. M. Bean, Esq.	5	1 0	30	50·23	267
,, (McArthurshead)	Bd. of Northern Lights	...	...	...	56·21	190
D ,, (Gruinart School House)	Mr. D. Mac Gilp,	5	1 0	214 T	46·58	229
,, (Rhuvaal)	Bd. of Northern Lights	...	...	...	48·22	215
Jura (Lowlandmansbay)	,, ,, ,,	...	...	...	57·43	205
,, (Fladda)	,, ,, ,,	...	...	...	51·22	196
Lismore (Mousedale)	,, ,, ,,	...	3 4	37 ?	46·16	205
Tyree (Hynish)	,, ,, ,,	...	...	...	68·86	199
BA* ,, (Heynish Farm)	L. Macquarie, Esq.	5	0 9	60 B	36·69	...

DIVISION XVI.—EAST MIDLAND COUNTIES.

KINROSS.						
D Loch Leven Sluice	W. Tullis, Esq.	...	0 6	360	33·40	...
FIFE.						
D Burntisland	Rev. G. H. Forbes	...	...	...	26·40	161
Dunfermline (Craigluscar)	W. Chisholm, Esq.	10	0 10	460 T	36·70	...
D ,, (Outh)	L. Dalgleish, Esq.	5	0 2	890 T	37·65	179
D Leven (Nookton)	W. McG. Muller, Esq.	5	0 6	80 T	25·53	172
Balfour	Mr. J. Dewar	3	0 6	127 T	22·65	143
Falkland (Lothrie Reservoir)	A. Buchan, Esq.	...	...	...	34·53	...
St. Andrews (Cambo House)	Sir T. Erskine, Bt.	3	0 8	50 T	23·02	...
,, (Feddinch Mains)	Mr. Muirhead	3	1 0	300 T	24·48	114

DIVISION XVI.—EAST MIDLAND COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter.	Rain Gauge. Height Above Ground.	Rain Gauge. Height Above Sea Level	Depth of Rain. 1874	Days on which ·01 or more fell.
			ft. in.	feet.	inches.	
FIFE—(*con.*)						
D B A Auchtermuchty	Dr. Troup	5	1 0	179 ⅄	30·93	162
Cupar Asylum	A. Buchan, Esq.	...	...	...	24·41	...
Kilmany (Mountquharrie House)	D. Gillespie, Esq.	...	...	...	26·20	...
PERTH.						
D Culross (West Grange)	J. J. Dalgleish, Esq.	5	0 2	116 ⅄	32·69	126
Menteith (Cardross Ho.)	H. D. Erskine, Esq.	8	1 3	120 L	46·30	...
Aberfoyle	Glasgow Water Works	8	0 6	60	58·60	169
Ledard	,, ,, ,,	...	...	1500	55·60	...
Dunblane (Kippenross)	J. Stirling, Esq.	6	0 4	150	32·90	...
Loch Dhu	Glasgow Water Works	8	0 6	325	86·50	185
,, Drunkie	,, ,, ,,	8	0 6	420	64·90	...
,, Vennachar	,, ,, ,,	8	0 6	275	58·30	168
Lanrick Castle	A. Glover, Esq.	3	0 9	...	50·60	168
Bridge of Turk	Glasgow Water Works	8	0 6	270	76·00	175
Loch Katrine (Tunnel Hill Top)	,, ,, ,,	8	0 6	830	77·80	...
Callander (Leny)	J. B. Hamilton, Esq.	3	0 4	340 ⅄	71·60	...
,, (The Gart)	A. Buchan, Esq.	...	...	...	57·51	...
Between Glen Finlas & Ben Ledi	Glasgow Water Works	8	0 6	1800	50·90	...
Glen Gyle	,, ,, ,,	...	...	380	106·60	191
Auchterarder House	Mr. Maclean	8	2 3	162	34·13	...
D ,, (Colquhalzie)	Mr. R. Morton	8	0 5	150 ?	42·25	165
D B A Strathfillan	Rev. A. Mackinnon	5	0 6	700	86·61	182
Stronvar (Balquhidder)	Mr. P. Colquhoun	...	...	...	88·48	...
Crieff (Ochtertyre)	A. Buchan, Esq.	...	...	...	40·63	...
Perth Academy	Dr. Miller, F.R.S.E.	15	64 5	83 ⅄	20·61	...
,, (Inchbank)	,, ,, ,,	10	1 6	24 ⅄	26·06	...
,, (General Prison)	A. Buchan, Esq.	...	...	48	30·76	...
,, (Logiealmond Lodge)	Mr. J. Stewart	...	4 6	1500 ⅄	112·50	...
Scone Palace	Mr J. Halliday	6	2 6	80 L	26·30	108
D B A Dunkeld (H.R.S.)	The Station Agent	5	1 0	225	40·09	142
Meigle (Belmont Castle)	Mr. J. Davidson	8	37 0	237	29·00	...
,, (Arthurstone)	P. Carmichael, Esq.	5	2 3	187 ⅄	29·37	...
,, (,,) *new gauge*	,, ,,	5	2 3	196	29·57	...
D B A Aberfeldy (H.R.S.)	The Station Agent	5	...	...	33·28	...
D B A Pitlochrie (H.R.S.)	,, ,, ,,	5	1 1	332 ⅄	29·58	195
,, (Bonskeid)	A. Buchan, Esq.	...	.	...	38·56	...
D B A Struan (H.R.S)	The Station Agent	5	1 0	610 T	37·19	...
D B A Dalnaspidal (H.R.S.)	,, ,, ,,	5	1 0	1450	69·22	...
FORFAR.						
D † Dundee (Westfield Cottage)	C. Clark, Esq.	5	5 6	50 T	23·58	188
D † ,, (Eastern Necropolis)	Mr. W. R. McKelvie	3	0 5	167 T	25·35	124
D † Craigton (*daily*)	‡Dundee Water Works	5	0 3	481	39·89	119
† ,, (*monthly*)	,, ,, ,,	11	0 3	481	37·90	...

‡ Information supplied by J. Watson, Esq.

DIVISION XVI.—EAST MIDLAND COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter	Height Above Ground	Height Above Sea Level	Depth of Rain. 1874.	Days on which ·01 or more fell.
			ft. in.	feet.	inches.	
FORFAR—(*con*).						
†Crombie Reservoir	Dundee Water Works	11	0 3	522 T	35·51	...
†Hill Head (*monthly*)	„ „ „	11	0 3	570 T	36·65	...
ɒArbroath	A. Brown, Esq., LL.D.	8	2 0	60 T	22·92	140
Montroseness	Bd. of Northern Lights	...	...	...	21·12	...
Montrose (Museum)	Mr. J. Campbell	7	29 0	37	20·78	93

DIVISION XVII.—NORTH EASTERN COUNTIES.

KINCARDINE.						
Lawrencekirk (Johnstone Lodge)	A. Buchan, Esq.	5	...	382	30·84	...
The Burn [Brechin]	Col. McInroy	6	0 6	250	28·80	...
Fettercairn	A. C. Cameron, Esq.	5	0 3	230 T	30·99	154
„ (Arnhall)	J. Vallentine, Esq.	6	0 2	240	26·70	120
Girdleness [Aberdeen]	Bd. of Northern Lights	...	4 7	86	18·48	...
ABERDEEN.						
ɒBraemar	Mr. J. Aitken	8	0 9	1114 T	38·08	200
Drumoak (Drum Castle) *monthly*	Mr. G. Gammie	5	1 8	275 T	33·69	...
Cromar (Logie Coldstone School)	Rev. J. G. Michie	5	4 0	608 T	28·61	176
ɒ „ („ „ Manse)	Rev. G. Davidson	5	1 0	694 T	29·31	192
ɒ „ („ „ Loanhead)	A. Farquharson, Esq.	5	1 0	743 T	27·00	184
Aberdeen (Rose Street) *new gauge*	A. Cruickshank, Esq.	5	0 5	95 T	28·38	...
„ (Grammar School)	Rev. A. Beverley	5	4 8	98 T	27·52	...
„ (Skene Street)	„ „ „	5	2 0	95 T	26·95	...
„ (Hammerfield, Cuparstone Rd)	„ „ „	5	1 0	120 T	28·16	212
„ („ „)	„ „ „	5	1 0	120 T	29·01	...
Midmar (Blackstock)	Mr. J. Barron	5	0 8	570 T	29·82	164
Lumphanan (Corse House)	Mr. J. Berry	5	3 0	833 T	35·47	...
Monymusk (Cluny Castle)	Mr. McDonald	5	0 0	280 T	24·90	125
ɒA*Alford (Bogside, Leochel C.)	W. Bruce. Esq.	5	3 0	882 T	34·85	180
Inverury (Kenmay)	Rev. G. Peter	8	0 8	300	33·06	...
„ („)	„ „	8	0 7	300	31·25	...
Ellon (Tillydesk)	W. Hay, Esq.	11	0 4	349 T	31·99	...
Peterhead (Buchanness)	Bd. of Northern Lights	...	...	...	21·73	...
Old Deer	J. Walker, Esq.	5	2 0	135 T	29·80	204
„ „ (Manse)	Rev. J. Peter	8	0 6	146 T	27·35	...
Turriff (New Byth)	A. Henderson, Esq.	5	0 6	391 T	29·86	...
New Pitsligo	Mr. D. Sturrock	3	0 3	501 T	35·59	192
Kinnairdhead	Bd. of Northern Lights	...	3 4	64?	32·39	...
BANFF.						
ɒATomintoul	Mr. R. Dey	5	1 0	1100 T	31·34	...
ɒA Keith (H.R.S.)	The Station Agent	5	1 0	364	28·50	162
ɒAMulben (H.R.S.)	„ „ „	5	...	...	29·55	...
Gordon Castle	Mr. Webster	8	1 6	70	28·17	...

DIVISION XVII.—NORTH EASTERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter	Height Above Ground ft.	in.	Height Above Sea Level feet.	Depth of Rain. 1874. inches.	Days on which .01 or more fell.
ELGIN OR MORAY.							
Grantown	Mr. W. Duncan	5	1	1	712 ⊼	30·90	205
D Rothes (Wester Elchies)	J. Gavin, Esq.	8	1	3	607 ⊼	30·24	196
D BA Forres (H.R.S.)	The Station Agent	5	1	0	20	25·15	139
Elgin (Ashgrove)	W. Topp, Esq.	8	0	3	33	25·05	...
„ (Institution)	Mr. J. Martin	6	0	6	50 T	29·48	...
D BA Burghead (H.R.S.)	The Station Agent	5	1	1	18	21·32	150
Covesea Skerries	Bd. of Northern Lights	...	...		...	17·16	131
NAIRN.							
BA Nairn (H.R.S.)	The Station Agent	5	1	0	60	24·37	181
D „ (Acharéidh)	A. Clarke, Esq.	8	1	0	60 ⊼	20·24	181

DIVISION XVIII.—NORTH-WESTERN COUNTIES.

WEST ROSS.‡							
D *Loch Alsh (Inverinate House)	Mrs. Matheson	5	3	0	150	92·47	218
D BA Strome Ferry (H.R.S.)	The Station Agent	5	1	0	40	88·36	263
D „ „ (Duncraig)	Mr. Lorraine	5	1	0	124 L	52·53	...
D BA Applecross Gardens	Mr. W. Whitelaw	5	0	9	70 ⊼	61·22	262
Strathconan	Mr. J. Watson	5	2	0	449 ⊼	66·04	280
BA Gairloch (Auchtercairn)	Mr. K. Mackenzie	5	6	0	13 ⊼	49·38	245
Loch Vraon	J. D. Baldry, Esq., C.E.	8	0	7	750	77·89	...
Lochbroom (Loch Drome)	„ „ „	8	0	7	850	87·79	...
Braemore House	„ „ „	8	0	7	750	76·63	...
„ Lodge	„ „ „	8	0	7	100	63·08	...
D BA *Lochbroom	Mr. M. Macleay	5	0	4	48	61·10	262
Isle of Lewis (Stornoway)	Bd. of Northern Lights	...	3	4	31 ?	32·31	163
„ („ Lewis Castle)	A. Buchan, Esq.	...	...		...	62·04	...
„ (Bernera)	Mr. J. Macdonald	6	1	0	200	70·15	...
„ (Butt of Lewis)	Bd. of Northern Lights	...	3	6	...	48·30	237
EAST ROSS.‡							
D BA Dingwall (H.R.S.)	The Station Agent	5	1	1	3	27·82	...
Cromarty	Bd. of Northern Lights	...	3	4	28 ?	16·93	91
*Invergordon Castle	B. B. Æ. McLeod, Esq.	5	2	0	20 ?	27·43	137
BA „ (H.R.S.)	The Station Agent	5	1	0	18	23·18	134
D Alness (Ardross Castle)	Mrs. Matheson	5	1	0	450 ⊼	38·89	231
D BA *Tain (Fearn)	R. Gordon, Esq.	5	1	0	58 ⊼	25·24	...
D „ (Springfield)	Mr. McLardy	5	1	0	80 ⊼	28·07	187
Tarbetness	Bd. of Northern Lights	...	3	4	61 ?	17·39	97

‡ Including Cromarty.

DIVISION XVIII.—NORTH-WESTERN COUNTIES—(*continued*).

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter	Rain Gauge. Height Above Ground	Rain Gauge. Height Above Sea Level	Depth of Rain. 1874.	Days on which .01 or more fell.
			ft. in.	feet.	inches.	
WEST INVERNESS.						
Kinlochmoidart	W. Robertson, Esq.	6	0 6	30 ?	79·30	...
Loch Sheil (Glenfinnan)	Major Macdonald	5	1 0	35 ?	123·96	267
Loch Nevis (Inverie)	Mr. N. Macdonald	5	2 6	14	90·80	155
Isle of Skye (Oronsay)	Bd. of Northern Lights	...	0 6	15 ?	101·15	202
„ (Kyle Akin)	„ „ „	...	0 2	3 ?	107·10	237
BA „ (Sligachan) *monthly*	Mr. Butters	8	1 4	...	99·50	...
DBA* „ (Portree)	Mr. J. Grant	5	1 3	165 M	98·55	295
„ (Dunvegan)	Mr. R. Mackintosh	5	1 0	16	103·97	279
Rona	Bd. of Northern Lights	...	. .	...	41·92	158
Barrahead	„ „ „	...	3 0	640 ?	30·82	202
S. Uist (Ushenish)	„ „ „	...	0 4	157 ?	51·66	213
„ (Manse)	A. Buchan, Esq.	...	...	...	31·40	...
N. Uist (Monach)	Bd. of Northern Lights	...	...	...	57·90	155
„ (Spanish, Loch Maddy)	C. Shaw, Esq.	...	...	...	77·76	...
Harris (Island Glass)	Bd. of Northern Lights	...	3 4	50 ?	52·61	154
EAST INVERNESS.						
D BA Dalwhinnie (H.R.S.)	The Station Agent	5	2 0	1450	47·73	164
BA* Laggan	Mr. A. McIntosh	5	0 9	821 M	68·98	225
D BA Aviemore (H.R.S.)	The Station Agent	5	1 1	700	30·66	..
D Strath Errick (Farraline House)	Capt. Fraser	4	0 6	700 B	38·20	...
D Glen Urquhart (Corrimony)	T. Ogilvy, Esq.	3	0 8	537 M	47·80	194
D Glen Strathfarrer	Mr. D. Fraser	5	1 0	461 T	69·62	258
D BA Dava (H.R.S.)	The Station Agent	5	1 2	1000	29·21	223
Inverness (H.R.S.)	„ „	5	...	...	28·67	139
D† „ (Culloden House)	A. Forbes, Esq.	7	3 0	82 T	25·31	...
D Cawdor [Nairn]	J. Joss, Esq.	5	1 0	260	29·89	177

DIVISION XIX.—NORTHERN COUNTIES.

SUTHERLAND.						
Dornoch (Ospisdale House)	W. E. Cattley, Esq.	5	1 0	...	30·53	...
BA* Invershin	Mr. G. Young	5	4 0	20	40·25	...
Golspie (Dunrobin Castle)	Mr. D. Melville	3	0 3	6 T	30·76	...
D BA „ (H.R.S.)	The Station Agent	5	1 0	27	31·41	...
Lairg	A. Buchan, Esq.	3	...	...	40·75	...
D BA „ (H.R.S.)	The Station Agent	5	1 0	...	44·34	212
BA* Helmsdale	Mr. J. Campbell	5	1 0	34	38·44	...
Assynt (Achumore)	J. Elliot, Esq.	3	0 6	150 ?	91·20	...
Scourie	J. Simpson, Esq.	3	0 4	16 L	46·50	...
Cape Wrath	Bd. of Northern Lights	...	3 6	355 ?	38·18	147

DIVISION XIX. -NORTHERN COUNTIES—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which ·01 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level	1874.	
			ft. in.	feet.	inches.	
CAITHNESS.						
D Wick (Pulteney House)	Capt. Rutherford, R.N.	5	6 0	70	23·20	180
„ (Nosshead)	Bd. of Northern Lights	...	3 4	127 ?	27·37	207
Thurso (Holburnhead)	„ „ „	...	0 4	60 ?	31·10	128
Dunnethead	„ „ „	...	...	...	33·60	133
Pentland Skerries	„ „ „	...	3 3	72 ?	25·83	154
ORKNEY.						
D S. Ronaldshay (Roeberry)	J. W. Gray, Esq.	5	1 2	150	33·49	229
Hoy (Cantickhead)	Bd. of Northern Lights	...	...	...	45·60	136
„ (Graemsay Sound, East)	„ „ „	...	3 4	27 ?	36·31	159
„ („ „ West)	„ „ „	...	...	...	34 94	191
Pomona (Tankerness)	S. Leitch, Esq.	5	0 9	...	34·53	...
Shapinsay (Balfour Castle)	Col. Balfour	4	0 6	50	30·70	...
D †Pomona (Sandwick)	Rev. C. Clouston, LL.D.	11	2 0	78	38·26	250
Stronsay (Auskerry)	Bd. of Northern Lights	...	...	...	30·85	113
Sanda (Start Point)	„ „ „	11	0 6	29 ?	42·78	132
BA *Papa Westray	Rev. C. Clouston, LL.D.	5	...	80 ?	38·55	247
North Ronaldsay	Bd. of Northern Lights	...	3 4	21 ?	35·54	169
SHETLAND.						
Sumburghead	Bd. of Northern Lights	...	...	...	17·68	202
Bressay Lighthouse	„ „ „	5	0 4	60	35·91	138
„ Manse	Rev. Dr. Hamilton	8	1 0	10	37·90	255
Stourhead	Bd. of Northern Lights	...	...	...	47·40	147
DBA East Yell	Mr. A. D. Mathewson..	5	1 0	176	49·78	308

IRELAND.

DIVISION XX.—MUNSTER.

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter	Height Above Ground	Height Above Sea Level	Depth of Rain. 1874.	Days on which ·01 or more fell.
			ft. in.	feet.	inches.	
CORK.						
D Cork (Queen's College)	Professor England ...	10	6 0	65	30·35	181
D ,, (Royal Institution)	Dr. Caulfield	10	50 0	70	29·37	146
Fermoy (Glenville)	H. Hudson, Esq., M.D.	8	2 0	514 ⊼	46·54	241
,, (Gas Works)	G. Anderson, Esq.	5	1 1	...	38·33	114
D ,, (St. James' Place)	A. Campbell, Esq.	5	1 0	114 ⊼	35·80	237
KERRY.						
D Caherciveen (Darrynane Aby.)	D. O'Connell, Esq. ...	5	1 1	12 ⊼	54·43	238
Kenmare (Dromore)	R. McClure, Esq. ...	5	0 9	200	63·11	...
Cara (Lake side)	J. B. Kennedy, Esq. ...	5	0 4	125 ⊼	50·23	...
Killarney (Killarney House)	Mr. F. Bedford	5	1 0	96 ⊼	62·61	212
WATERFORD.						
Cappoquin	Sir J. Keane, Bt.	...	...	...	39·13	168
D Waterford (Newtown)	Mr. E. Garnett	9	4 6	60 ?	37·77	204
D ,, (Portlaw)	S. B. Pim, Esq.	24	25 0	50	35·97	149
,, (Curraghmore)	Mr. G. Fairbairn	..	..	...	36·14	...
,, (Gas Works)	G. Anderson, Esq.	5	...	...	31·2[illegible]	...
TIPPERARY.						
D Clonmel (Glenam)	Miss Grubb	5	1 10	80 ⊺	[illegible]·10	197
D Gurteen [Shinrone]	Miss Smith	5	1 0	2[illegible] ⊼	[illegible]	[illegible]
Cloughjordan (The Deer Park)	H. B. Trench, Esq. ...	5	1 0	447	36·69	172

DIVISION XXI.—LEINSTER.

WEXFORD.						
Wexford (Reclaimed Lands)	C. W. Palliser, Esq. ...	10	1 0	1 ⊼	33·17	117
D New Ross (Rosbercon Cas.)	A. E. Graves, Esq. ...	6	2 6	60 ⊼	34·36	139
D ,, (Longraigue)	J. Deane, Esq.	5	1 1	210	35·86	197
D Enniscorthy (Ballyhyland)	J. Moffat, Esq.	5	1 0	420 B	34·37	213
D Gorey (Courtown)	Earl of Courtown	5	3 0	80 ?	33·72	167
KILKENNY.						
New Ross (Tullogher)	D. A. Milward, Esq. ...	5	1 0	500 ⊼	41·50	199
Inistioge (Woodstock)	Rt. Hon. W. F. Tighe	5	4 6	400 ⊺	39·67	168
D * Stoneyford (Inisnag)	Rev. J. Graves	5	1 0	220 ⊼	29·80	...

DIVISION XXI.—LEINSTER—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter	Height Above Ground ft.	in.	Height Above Sea Level feet.	Depth of Rain. 1874. inches.	Days on which ·01 or more fell.
CARLOW.							
D Bagnalstown (Fenagh)	D. W. P. Beresford, Esq.	5	1	0	340 ⅄	32·83	198
D Carlow (Browne's Hill)	R. C. Browne, Jun., Esq.	5	1	0	291 ⅄	33·90	188
QUEEN'S COUNTY.							
D Abbey Leix (Blandsfort)	J. L. Bland, Esq.	5	2	6	590 ?	33·56	202
KING'S COUNTY.							
Birr Castle	Earl of Rosse	8	0	8	180 ⅄	35·65	247
D Portarlington	Dr. Hanlon	5	1	2	240 L	29·02	271
D Rathangan (Clonbrin)	Mrs. W. Gresson	5	1	3	224 T	31·98	201
Tullamore	H. J. B. Kane, Esq.	10	3	0	235	28·52	196
WICKLOW.							
D† Bray (Fassaroe)	E. Barrington, Esq.	10	5	0	250	31·48	181
DUBLIN.							
D Black Rock (Rockville)	T. Bewley, Esq.	12	29	0	95 ⅄	39·18	126
D Monkstown (Easton Lodge)	Greenwood Pim, Esq.	3	0	6	90	28·06	167
D† Dublin (FitzWilliam Square)	Dr. J. W. Moore	5	3	4	54 T	27·19	186
D „ (Eccles St.)	H. A. Cosgrave, Esq.	5	3	4	70	26·20	185
„ (O. S. O. Phœnix Park)	Lieut. Rowe, R.E.	31	10	0	170 ⅄	27·83	186
Glasnevin (Botanic Gardens)	D. Moore, Esq.	9	0	11	65 ⅄	26·29	167
D Balbriggan	Rev. S. P. Warren	5	1	0	57 T	31·33	196
„ (*monthly*)	„ „ „	5	1	0	57 T	30·71	...
MEATH.							
D Clonee (Williamstown)	W. Johnston, Esq.	5	1	0	200	28·63	179
WESTMEATH.							
Athlone (Twyford)	J. Hodson, Esq.	5	4	0	188	37·92	254
LOUTH.							
D Castle Bellingham (Drumcashel)	Mrs. Macan	8	1	3	225 T	30·81	210

DIVISION XXII.—CONNAUGHT.

GALWAY.							
Gort (Cregg Park)	R. J. Lattey, Esq.	5	3	0	130 ⅄	46·34	216
D Galway (Queen's Coll.)	Prof. Curtis	16	9	0	30	51·84	238
D Ballinasloe	W. H. Kempster, Esq.	5	0	6	150 ?	41·48	244
Ahascragh (Clonbrock)	Rt. Hon Lord Clonbrock	10	5	9	200	46·25	207
Tuam (Gardenfield)	H. Kirwan, Esq.	5	6	0	136 T	41·49	...
ROSCOMMON.							
* Holywell	H. Smyth, Esq.	5	5	6	...	31·54	...

DIVISION XII.—CONNAUGHT—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge. Diameter	Height Above Ground ft.	in.	Height Above Sea Level feet.	Depth of Rain. 1874. inches.	Days on which ·01 or more fell.
MAYO.							
Hollymount (Cloona Castle) ...	J. Simson, Esq.	3	2	0	80?	46·80	...
D Crossmolina (Enniscoe)	J. Pratt, Esq.....	5	0	11	...	55·15	242
SLIGO.							
BA*Buninnadden (Doo Castle)...	Mr. D. O'Dowd.....	5	1	0	...	41·10	...
Sligo (Mount Shannon).....	F. M. Olpherts, Esq...	5	4	5	70 B	45 56	225

DIVISION XXIII.—ULSTER.

CAVAN.							
D Killeshandra (Drummany)	H M Anketell Jones Esq	10	32	6	292 ⅄	39·99	211
D*Belturbet (Red Hills)	Rev. E. Whyte Venables	5	0	9	208 ⅄	32·15	228
FERMANAGH.							
Enniskillen (Florence Court) ...	Earl of Enniskillen F.R.S	8	1	9	150	45·06	210
ARMAGH.							
D Armagh Observatory	Rev. Dr. Robinson F.R.S	10	1	7	208 ⅄	28·73	201
DOWN.							
D Seaforde	Colonel Forde	8	0	5	180 ⅄	32·20	185
† Castlewellan (Bann Res)	J. Smyth, Esq. C.E. ...	8	1	0	440 T	35·50	...
D† Banbridge (Milltown)	„ „ „ ...	8	0	8	200 T	28·50	198
† „ „ (*monthly*)	„ „ „ ...	12	40	0	220 T	24·39	...
D† Waringstown	Major Waring	8	0	4	190 ⅄	29 66	184
D Sydenham (Alma House)	R. Reade, Esq.	5	1	1	60	38·48	225
ANTRIM.							
D Aghalee [Lurgan]	Lancelot Turtle, Esq...	5	1	0	105 ⅄	30·03	170
„ [„] .....(*monthly*)	„ „ ...	9	1	0	105 ⅄	29·63	...
D† Belfast (Queen's College).....	Mr. W. Taylor	11	7	4	68 ⅄	34 78	176
† „ (Old Park).....	W. Girdwood, Esq.....	5	4	0	224 ⅄	36·65	192
D† „ (Antrim Rd.)	G. Thompson, Esq. ...	7	7	0	144	31·31	179
Carrickfergus (White Abbey ...	W. Valentine, Esq. ...	5	1	0	50	35·59	193
BA*†Antrim (The Manse)	Rev. J. H. Orr	5	1	0	150 ⅄	29·43	...
LONDONDERRY.							
Lissan [Cookstown]	Sir N. A. Staples, Bt.	5	0	4	300	41·95	...
D*Garvagh (Moneydig)	H. R. Morrison, Esq...	5	1	0	121 T	40·29	212
Londonderry	D. Watt, Esq.	8	0	6	80	44·85	...
Newtown Limavady (Drenagh)..	C. T. McCauslands, Esq.	...	1	0	...	39·07	...
Bellarena	Sir F. Hoygate, Bt. ...	5	1	0	12 T	38·85	245

DIVISION XXIII.—ULSTER—(*continued.*)

STATIONS.	AUTHORITIES.	Rain Gauge.			Depth of Rain.	Days on which ·01 or more fell.
		Diameter	Height Above Ground	Height Above Sea Level	1874.	
			ft. in.	feet.	inches.	
TYRONE.						
D Aughnacloy Archdeaconry	Rev. T. G. Stokes...	5	4 6	255 ⅄	35·75	206
D Omagh (Edenfell)	Major Buchanan	8	1 0	275	35·50	233
DONEGAL.						
D B A Ballyshannon	H. Allingham, Esq. ...	5	1 1	7	42·85	259
Raphoe (Convoy)	Major Montgomery ...	5	1 0	100	45·81	250
,, ,, ...	,, ,, ...	5	4 0	100	45·55	250
B A Letterkenny (Glen Doen) ...	Rev. Dr. H. Kingsmill	5	1 8	108 ⅄	56·19	...
Dunglow (Templecrone)	Rev. A. Delap	8	0 8	10	45·71	261
B A Ramelton	J. A. Mahony, Esq. ...	5	1 2	21	44·27	229
D ,, (Ballyare)	G. M. W. Hill, Esq.	5	1 0	60	34·11	195
D Moville.....	Rev. F. Smith	12	4 0	100 ⅄	44·40	263
Dunfanaghy (St. Helen's).....	C. B. Wolseley Esq M.D.	5	3 0	38 T	43·25	245

G. J. S.

FINANCIAL.

THERE is little to chronicle under this head except acknowledgments to those who continue their support to this work—to those who have increased their aid and to those who have commenced to help us with funds as well as with observations. The augmentation of our resources produced by the last two causes has, however, been neutralized, or nearly so, by the loss of upwards of £20 through the death of several subscribers.

In fact just as constant vigilance is necessary to prevent large districts being left without an observer, so the constant, but happily, slow diminution in the list of subscribers, must be checked by the addition of new ones. Observations and money are equally necessary for the maintenance and development of the work we have in hand; we never hesitate to ask for the former, but though the latter is equally necessary, it is not so pleasant to ask for it. Perhaps, some day, there may be a Danae's shower, we do not desire it for our own sake, but it would enable us to make this work more worthy of all parties. At present we are, in too many instances, obliged to perform the remarkable operation of clipping our own editorial wings. Whither we might fly were it otherwise we decline to say. If our readers wish to see, we have told them what is necessary to enable them to do so.

List of all Sums of £1 *and upwards received in payment for Books, Diagrams. &c., or as Contributions to the General Expenses of Rainfall Investigations in* 1875.

	£	s.	d.
Abbotts, R. W., Esq.	3	10	0
Ainsworth, Major D.	1	0	0
,, R. H., Esq.	1	14	0
Aire and Calder Navigation ...	2	7	0
Alexander, J., Esq.	1	0	0
Allison, R. A., Esq.	1	18	0
Ames, E. L., Esq.	1	0	0
Andersson, A. R., Esq.	2	2	0
Appach, R., Esq.	1	0	0
Arnold, W., Esq.	1	5	0
Assheton, R., Esq., M.P.	1	0	0
Atkinson, A., Esq.	1	1	0
Backhouse, T. W., Esq.	1	10	0
Backhouse, C. J., Esq.	1	0	0
Baker, Mr. W.	1	0	0
,, W. C., Esq.	1	1	0
Balme, E. B. W., Esq.	2	12	0
Barber, J. T., Esq.	2	0	0
Barrington, E., Esq.	1	0	0
Barter, C. S., Esq., M.D.	1	1	0
Bartlett, J. E., Esq.	2	0	0
Baxendell, J., Esq.	1	13	0
Bayning, The Lady	1	1	0
Beardsley, Amos, Esq. (5 yrs.)	2	10	0
Bell, T., Esq., F.R.S.	1	1	0
Bewley, T., Esq.	1	0	0

	£	s.	d.
Bicknell, P., Esq.,	3	0	0
Biddell, G. A., Esq.	1	1	0
Bigge, Rev. J. F.	1	0	0
Birkbeck, W., Esq.	1	0	0
Blake, W., Esq.	2	0	0
Blamire, Rev. W. H.	1	8	0
Bolckow, H. W. F., Esq., M.P.	1	10	0
Bosanquet, S., Esq.	1	0	0
Boughton, Miss F. R. R.	2	2	6
Bowen, Mr. W.	1	0	0
Boyd, Rev. Canon	1	1	0
Boys, Rev. H. A.	1	0	0
Bravender, J., Esq.	1	5	0
Bridgeman, Hon. & Rev. J. R. O.	1	1	0
Bridport, Rt. Hon. Vis. (2 yrs.)	2	0	0
Bridson, H., Esq.	1	5	0
Briggs, D. Grant, Esq.	2	2	6
Brooke, The Rev. J.	1	5	0
Brown, A. J. D., Esq.	1	0	0
Brown, Rev. D.	1	0	0
Bryan, Mr. J.	1	5	0
Bumpstead, The Rev. T. J.	1	0	0
Burder, G. F., Esq., M.D.	1	0	0
Burgess Wilson, Mrs.	1	11	0
Burlingham, R., Esq.	1	12	0
Burra, J. S., Esq	1	5	0
Bushell, R., Esq.	2	0	0
Bywater, Mrs.	2	2	0
Campbell, A., Esq.	1	0	0
,, Colin, Esq.	1	0	0
Carmichael, P., Esq.	1	5	0
Cator, C. O. F., Esq.	1	10	0
Cattley, W. E., Esq., M.A.	1	5	0
Chapman, E., Esq.	1	11	0
Charlton, W. H., Esq.	1	0	0
Chrimes, R., Esq.	10	0	0
Christopherson, Rev. A.	1	0	0
Clark, Charles, Esq.	1	0	0
Clay, A., Esq. (3 years)	1	1	0
Clegram, W. B., Esq., C.E.	1	10	0
Collins, C. R., Esq.	1	12	0
Coode, E., Esq.	1	3	0
,, W., Esq.	1	7	0
Cooke, The Rev. R. B.	1	0	0
,, J. H., Esq.	1	10	0
Cooper, Col.	1	0	0
Corden, G., Esq.	1	1	0
Courtauld, S., Esq.	1	1	0
Crowley, P., Esq.	1	17	0
Darby, C., Esq.	2	0	0
Davies, Rev. R. P.	1	0	0
Davis, T. H., Esq.	1	1	0
Dines, G., Esq.	1	10	0
Divett, J., Esq.	1	0	0
Dod, Whitehall, Esq.	4	0	0
Dodgson, H., Esq., M.D.	1	1	0
Doncaster, D., Esq., Jun.	1	0	0
Douglas, S., Esq.	1	0	0
Drake, Rev. R.	1	5	0
Du Port, Rev. J. M.	1	0	0
Dymond, E. E., Esq.	1	1	0
,, W. P., Esq.	1	0	0
Eaton, H. S., Esq.	1	0	0
Elworthy, W., Esq.	1	0	0
Erskine, Sir T., Bart.	1	5	0
Evans, F. G., Esq.	1	10	0
Eyre, Rev. W. L. W.	1	10	0
Fawcett, E. G., Esq.	1	0	0
Fenwick, T., Esq., C.E.	1	1	0
Ffolkes, The Rev. H.	1	0	0
Field, Rogers, Esq., C.E.	1	12	0
Fielden, J., Esq., M.P. (3 yrs.)	6	0	0
Filliter, E., Esq., C.E.	1	12	0
Forde, Colonel	2	5	0
Foster, R., Esq.	1	7	6
Fox, J., Esq., C.E.	1	5	0
Gainsford, W. D., Esq.	1	9	0
Gale, J. M., Esq., Esq.	1	0	0
Gamlen, W. H., Esq.	1	1	0
Garnett, W., Esq.	5	0	0
Gavin, J. Esq.	1	6	0
Getling, G. B., Esq.	1	0	0
Giles, J., Esq.	1	6	0
Gill, H. Septimus, Esq.	1	1	0
Gillow, Rev. Dr.	1	0	0
Graves, Rev. J.	1	0	0
Grey, Admiral Hon. Sir F. W.	2	0	0
,, Right Hon. Earl, K.G.	1	0	0
Griffith, Capt.	1	0	0
Grubb, Miss	1	0	0
Gulson, J., Esq.	1	11	0
Hankinson, R. C., Esq.	1	6	0
Harris, W. J., Esq.	2	13	0
Harrison, Mr. A.	1	0	0
,, W. F., Esq.	1	11	0
Healey, G., Esq.	1	5	0
Heathcote, J. M., Esq.	1	0	0
Heberden, Rev. W.	1	0	0
Hedgeland, Rev. Preb.	1	1	0
Heelis, J. Esq. (2 years)	1	0	0
Herbert, J. M., Esq.	1	10	0
Heywood, A. H., Esq.	1	6	0
Hill, The Rev. Canon	1	1	0
,, J. H., Esq.	1	11	0
Holdsworth, J. S., Esq.	1	12	0
Hopkins, Rev. T.	1	16	0
Horner, Mrs.	2	0	0
Horncastle, H., Esq.	1	0	0
Howard, W. D., Esq.	10	10	0
Howlett, Rev. F.	1	0	0
Hubbard, Egerton, Esq. M.P.	5	10	0
Hudson, H., Esq., M.D.	3	0	0
Hull, The Rev. J.	1	0	0
Hutchinson, A., Esq.	1	0	0
Huyshe, Rev. J. (2 years)	2	0	0
Jackson, M., Esq.	1	0	0
,, Mrs. R.	1	0	0
James, T., Esq.	2	4	0
Jeans, J. W., Esq. (3 years)	1	0	0
Jowers, F. W. E., Esq.	1	10	0
Karslake, The Rev. W. H.	1	1	0
Ker, R., Esq.	1	1	0
King, S., Esq.	1	1	0
Kitson, J., Esq.	1	6	0
Knowles, J., Esq.	1	0	0
Kynaston, Rev. H.	2	0	0

	£	s.	d.
Leach, J., Esq.	1	0	0
Leather, J. T., Esq., C.E.	2	0	0
Lighton, Rev. Sir C., Bart.	1	0	0
Lippincott, R. C. C., Esq.	1	0	0
Lockhart, A. E., Esq.	1	0	0
Longman, W., Esq.	3	10	0
Lucas, W., Esq.	2	0	0
Lund, C., Esq.	1	0	0
Macan, Mrs.	1	0	0
McDonald, A., Esq.	1	5	0
Macfie, R., Esq.	1	0	0
Mackeson, H. B., Esq.	1	10	0
McLean, J. Howard, Esq.	1	0	0
Majendie, L. A., Esq.	1	2	0
Malden, The Rev. C.	1	5	0
Marshall, A., Esq.	4	0	0
,, H. C., Esq.	4	12	6
Marten, J., Esq.	1	5	0
Massie, R., Esq.	1	5	0
Matheson, Mrs. (2 years)	2	2	0
Mathew, Major	2	13	6
Matthews, J., Esq.	1	1	0
Maxwell, Rev. E.	1	12	0
Melville, A. S. L., Esq.	1	1	0
Mitchell, F. J., Esq.	1	1	0
Morris, Rev. W. R.	1	0	0
Muirhead, H., Esq., M.D.	1	3	0
Murdoch, Rev. J. B.	1	0	0
Musgrave, W., Esq.	1	2	0
Nash, W. D., Esq.	1	1	0
Neumann, H., Esq.	1	5	0
North, A., Esq.	1	1	0
Nutter, J., Esq.	1	1	0
Orde, Sir J. P., Bart.	2	1	0
Oscott, S. Mary's College	1	0	0
Palmer, Mrs.	1	5	0
Parker, Rev. Dr.	1	0	0
Parkin, A., Esq.	1	5	0
Parnell, J., Esq.	1	5	0
Pasley, Admiral Sir T. S., Bt.	2	0	0
Paterson, Miss	1	0	0
Paulin, T., Esq.	2	15	0
Paxton, H., Esq.	1	0	0
Payne, G. Jun., Esq.	1	1	0
Peake, H. W., Esq.	1	1	0
Peckover, A., Esq.	1	1	0
Pennant, P. P., Esq.	1	1	0
Penrose, W. H., Esq.	1	1	0
Phillips, J. Capel, Esq.	1	0	0
Piggott, G., Esq.	1	0	0
Plant, T. L., Esq.	1	1	0
Pleydell, J. C. Mansel, Esq.	1	0	0
Preston, The Rev. T. A.	3	0	0
Prince, C. L., Esq.	1	1	0
Pryse, Sir Pryse, Bart.	1	6	0
Radcliffe, T., Esq.	1	10	0
Radford, Dr.	1	12	0
Ramsden, J. E., Esq.	1	1	0
Redford, R., Esq.	1	0	0
Rendell, Rev. A. M.	1	0	0
Reynolds, J. Esq.	1	1	0
,, L. W., Esq.	1	5	0
Robinson, J., Esq.	1	5	6
Robson, J., Esq.	1	0	0
,, J. W., Esq.	2	0	0
Scott, W., Esq.	1	1	0
Sharples, G., Esq.	1	0	0
Shiffner, Miss I.	1	1	0
Slade, F., Esq.	1	0	0
Smith, J., Esq.	2	2	0
Smyth, J., Jun., Esq., C.E.	1	10	0
Soames, Rev. C.	1	1	0
Southall, E. P., Esq.	1	6	6
,, H., Esq.	1	0	0
Spence, R., Esq.	1	1	0
Squire, W., Esq.	1	4	0
Stokes, H., Esq.	1	0	0
Stone, W. H., Esq.	1	0	0
Stuart, Col.	1	0	0
Talbot, J. G., Esq. (2 years)	1	0	0
Taylor, F., Esq.	1	0	0
,, J., Esq.	1	1	0
,, Rev. H.	1	7	6
Tighe, Right Hon W. F.	1	0	0
Tippinge, F. G., Esq.	1	1	0
Trimleston, The Rt. Hon. Lord	1	0	0
Tucker, H., Esq.	1	0	0
Tuckett, F. F., Esq.	1	5	0
Tyndall, W. H., Esq.	1	1	0
Upton, H., Esq.	1	0	0
Ward, Dr.	1	10	0
,, H., Esq.	1	10	0
Waring, Major	1	10	0
Warren, G., Esq.	2	1	0
Watkins, J., Esq.	2	12	0
West, F., Esq.	1	1	0
Weston, Rev. G. F.	1	0	0
Whitbread, S. C., Esq.	1	0	0
White, J., Esq.	1	0	0
Whitehead, J., Esq., M.D.	1	1	0
Wigram, J. R., Esq.	1	0	0
Williams, Rev., W. W.	1	0	0
Wilson, Thomas, Esq	1	5	0
Wingfield, the Rev. C. L.	1	0	0
Winter, Rev. E. W.	1	0	0
Woodhouse, A. J., Esq.	1	1	0
Wortham, H., Esq.	1	10	0
Wright, Philip, Esq., F.C.S.	1	19	6
Yonge, J. B., Esq.	1	0	0

[Subsequent receipts will be acknowledged monthly in the *Meteorological Magazine*. Cheques should be crossed National Bank, and Post Office Orders drawn on Camden Road.]

SUPPLEMENTARY TABLE OF IMPERFECT RETURNS.

This table contains records not absolutely perfect, but so nearly so that it appears undesirable to omit them altogether. The causes which preclude their insertion in the General Tables are very various, and need not be mentioned, as it must be distinctly understood that they merely represent the total rainfall for the whole year as accurately as the Observers and the Editor can determine it.

DIV.	COUNTY.	STATION.	OBSERVER.	Rain Gauge. Diameter.	Rain Gauge. Height Above Ground	Rain Gauge. Height Above Sea Level.	Depth of Rain. 1874
				in.	ft. in.	feet.	inches.
I.	Middlesex	Winchmore Hill	T. Paulin, Esq.	8	1 0	...	20·89
		Enfield Chase		8	1 0		
II.	Kent	Beckenham (Parkside)	C. O. F. Cator, Esq.	8	0 3	139	22·97
		,, (The Hall)		8	0 5	169	
,,	Sussex	Brighton (Buckingham Place)	F. E. Sawyer, Esq.	5	1 0	200	23·56
				5	5 0	206	
,,	,,	Winchelsea	Mr. T. Budden	5	1 0	110	22·29
,,	,,	,,	Miss Stileman	5	1 1	115	21·02
,,	Berkshire	Kingsclere	R. Warrener, Esq.	...	...	...	27·47
IV.	Essex	Braintree (Bocking)	S. Courtauld, Esq.	...	1 0	...	20·06
,,	Norfolk	Norwich	Mrs. Evans	5	2 3	120	21·52
V.	Devon	Coryton (Lew Down)	Mr. T. Symons	12	6 0	445	47·10
				5	4 0	445	
,,	Somerset	Wiveliscombe	Mrs. B. Boucher	5	1 2	...	32·82
,,	,,	Taunton (The Castle)	G. Gillett, Esq.	8	1 6	50	29·24
		,, (Hoveland'Ter)		8	...	150?	
VIII.	Lancashire	Kirkham (Weeton Res.)	J. Bradley, Esq.	10	1 0	150	23·69
IX.	York	Mirfield (Cote Wall)	E. B. W. Balme, Esq.	...	0 9	200	22·08
,,	,,	Halifax (Bermerside Ob)	J. Gledhill, Esq.	8	...	500	33·41
,,	,,	Drax	E. Spink, Esq.	5	3 4	...	18·45
X.	Northumberland	Shotley Hall	Mr. J. Coulson	5	0 3	315	28·23
,,	,,	Byrness	Rev. J. Nicholson	5	0 10	700	38·86
,,	Cumberland	Skiddaw	Mr. Nixon	8	1 0	1077	53·62
,,	,,	,, (Whitbeck)	,, ,,	8	1 0	...	50·25
,,	Westmoreland	Shap (The Greyhound)	Mr. Abbot	5	1 0	830	60·06
		,, (Copy Hill)	Mr. Hoggarth	5	1 0	874	
XI.	Pembroke	Castle Malgwyn	Mr. W. Hutchison	5	1 2	50	43·34
,,	Carnarvon	Llanllyfni (Cilgwyn Qy)	Major Mathew	5	1 0	900	56·83
XII.	Dumfries	Canobie (Byreburnfoot)	J. Little, Esq.	3	0 6	140	57·45
,,	,,	Ewes	,, ,,	3	0 6	407	60·77
,,	,,	,, (Burnfoot)	,, ,,	3	0 6	480	63·34
XIII.	Selkirk	Galashiels	Dr. Somerville	5	0 6	410	33·20
XVI.	Ayr	Ayr (Holmston)	J. Drennan, Esq.	...	...	...	36·93
		,, (Auchinlee)					
,,	Renfrew	Greenock (Compen Res.)	J. Wilson, Esq.	6	0 9	616	67·30
XV.	Argyll	Mull (Glengorm)	J. N. Forsyth, Esq.	6	0 9	200	62·35
		,, (Quinish)		6	0 6	35	
XVI.	Perth	Innerhadden	Hon. G. Elphinston	5	1 0	192	37·37
,,	,,	Logierait (Strath Tay)	Rev. G. D. R. Munro	5	1 0	313	29·09
		Grandtully	The Station Agent.	5	1 0	...	
XVII	Aberdeen	Tillypronie	A. Buchan, Esq.	...	...	...	27·83
,,	,,	Inverury Manse	Rev. J. Davidson	9	0 0	220	27·38
,,	Nairn	Nairn (Academy St.)	J. H. Browne, Esq.	5	2 0	55	23·59
		,, (Brit. Linen Bnk)		5	2 0	47	
XX.	Tipperary	Cahir (Tubrid)	T. Palmer, Esq., M.D.	5	1 0	280	38·59
,,	Clare	Killaloe	W. H. Mayne, Esq.	10	5 0	...	51·76
XXI.	Louth	Dundalk (Stephenstown)	Lieut.-Col. Fortescue	...	0 4	75	28·54

List of Stations of which the Records were quoted in 1873, *but are not in* 1874, *with the reasons for their omission.*

EXPLANATION.—The Stations are quoted in the order of their sequence in the printed tables, and the causes of omission are indicated as follows :—

NR—No reply; NO—Not observed; T—Terminated; RI—Return imperfect.

Hampton Wick, Fairlight	T	Stroud, Castle Villas.....	NR	Presteign	T
London, Guildhall, E.C.	RI	Cheltenham, Cowley Man.	T	Rhayader, Cefnfaes	T
,, Mile End, E. ...	T	Gloucester, Quedgley Ho.	RI	Wrexham, Broughton Ho	NR
Islington, St. Mary's Rd.	T	,, Barnwood Ho.	RI	Hawarden [Chester].....	RI
Stamford Hill.....	T	Newent, Boyce Court ...	T	Llanllyfni, Cilgwyn	T
Winchmore Hill.....	T	Craven Arms, Stokesay..	NO	Bethesda, Penrhyn Quarry	T
Croydon, Waldronhurst..	T	Bridgnorth, Quatt School	NO	,, Brynderwen ...	T
Battersea, St. John's Col.	RI	Coalbrookdale, Buildwas	T	Menaifron	T
Lenham	T	Dudleston, Erwy	T	Kirk Michael	T
Chislehurst, Heathfield...	T	Whitchurch.....	T	Kelton House.....	T
Chichester Infirmary.....	NO	Alcester, Sambourne.....	NO	March Hill Cottage	T
Lavington, Beechwood Ho.	T	Blackdown	T	Byreburnfoot	RI
Brighton, Buckingham Pl	RI	Coventry, Radford.....	T	Ewes	RI
Poynings, Dyke House...	NR	Nuneaton, Camp Hill ...		Burnfoot	RI
Fulking	NR	Wigston	T	Abbey Park	NR
Buxted, Heron's Ghyll...	T	Leicester, Freeman's Com.	RI	Cairnmuir	NR
Eridge Castle.....	NR	,, Knighton Ho...	T	Fiendhill'.....	NR
Alton, East Tisted Rect.	RI	Lincoln, Bracebridge.....	T	Slogarie	NR
Reading (Englefield) ...	NR	Louth, Westgate	RI	Princes Street	RI
Eton	T	Ripley, The Elms	T	Leith	RI
Charlbury	T	Brassington Vicarage ...	T	Wiston.....	RI
Pottespury	T	Chatsworth	NR	Girvan	RI
Northampton, G. Phillips	T	Tarporley	NR	Cameron House.....	NR
St. Neots, Waresley	NR	Neston	NR	Firkin	NR
Eversholt, Lindon	NR	Runcorn, Weston Point..	NR	Arrochar	RI
Sandy, The Lodge.....	RI	Prestwich Reservoir	NR	Park Hall	NR
Barking	T	Kirkham, Weeton Res...	RI	Bridge of Allan.....	NR
Billericay.....	NR	Blackburn, Audley Place	T	Brodick	T
Harwich, Ramsey.....	NO	Hest Bank	RI	Bridge of Orchy	NR
Eye, Yaxley	T	Cartmel Vicarage	T	Glen Etive	RI
Diss, Dickleburgh	T	Mirfield, Cote Wall	RI	Dhuhearthach	RI
Mulbarton	RI	Beverley, New Walk ...	T	Calgary	NR
Bexwell	T	Beadlam Grange	T	Sound of Mull	RI
Carleton Farehoe	T	Scarborough	NR	Birkhill	T
Norwich, St. Catherine's	RI	Danby	NO	Deanston	T
Upwey.....	NR	Guisborough, Upleatham	NR	Orchil	NR
Bridport, East Street ...	T	Shotley Hall	RI	Trinity Gask	RI
Plymouth, Stonehouse...	NR	Wylam Hall	T	Aberfeldy, Blackhill.....	NR
Totnes, Dart View	T	Falstone	T	Logierait	T
Dartmoor, Rundlestone...	T	Kielder.....	T	Kettins	T
Tavistock, West Street...	T	Otterburn	RI	Montrose, Bridge Street.	RI
Rill Court	T	Bamburgh	T	Pitmuxton	T
Polapit Tamar	RI	Whitehaven, Millgrove...	T	Inverury Manse.....	RI
Sidmouth, Blackmoor Hall	T	Ullswater, Watermillock.	T	Peterhead	NR
,, Belgrave	T	Skiddaw	RI	Dingwall.....	T
Hatherleigh, Jacobstowe	T	Penrith, Fell Lane	NR	Achanault	NR
Cullompton, Bradninch..	NR	,, The Luham ...	NR	Glenquoich	NR
Honiton, Broadhembury	T	Wigton, Brayton	NR	Beaufort Castle	NR
Tiverton, Chevithorne ...	T	Alston, Nent Head	T	House of Tongue	RI
Great Torrington	RI	Bowness, Belsfield.....	NR	Kirkwall	T
Bideford, Buckish	T	Windermere, High Ho...	T	Glenbehy.....	T
St. Mewan	RI	Chepstow, Tutshill	NR	Killaloe	RI
Callington, Church St....	NR	Tintern Abbey	RI	Coolattin.....	NO
Taunton College School..	RI	Felindre, Lliw Reservoir	NR	Markree	RI
,, The Castle	T	Milford.....	T		
Wiveliscombe.....	RI	Llanwrtyd	T		

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